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African Civilizations

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Chapter 6

Opportunity and constraint: the West African savanna

In May 2012 the United Nations estimated that 18 million people in the Sahel region of West Africa were suffering from food shortages caused by drought and conflict and that nearly 1.5 million children were near starvation. The Sahel was defined broadly, although technically it is only the driest of the savanna zones south of the Sahara Desert. Nevertheless, how could it be that one of the areas of early urbanization and state formation considered in this book is situated within this apparently disastrous zone? Clearly, its occupants did not always face the bleak situation that now exists. Particularly this seems to have been the case immediately bordering the southern edge of the Sahara, which was the setting for important social and political developments during the first and second millennia AD. Some historical sources indicate conditions that were far from bleak. For example, in the early sixteenth century Leo Africanus said of Jenné, situated in the Inland Niger Delta on the edge of the Sahel zone: ‘This place exceedingly aboundeth with barlie, rice, cattell, fishes, and cotton’ (Africanus 1896: vol. 3, 822). This description was by an outsider, for Leo Africanus came from North Africa, but a local scholar, al-Sa’di, writing in about 1655, wrote: ‘This city is large, flourishing and prosperous; it is rich, blessed and favoured by the Almighty ... The area around Jenné is fertile and well populated; with numerous markets held there on all the days of the week’ (al-Sa’di 1964: 22–4). Although it was pointed out that al-Sa’di might have been biased in favour of Jenné (McIntosh and McIntosh 1980: vol. 1, 49), Bovill (1968: 135) thought that this was a ‘convincing tribute’. Thus, it seems from historical sources, oral tradition, and archaeological data as if the West African savanna was in the past a zone that offered opportunities as well as constraints to the people who lived there.

Geographical location and environmental factors

Throughout the history of the human race in Africa, the most important ecosystem in the continent has probably been the savanna. Rich in faunal and floral resources, by the Holocene attractive for both cereal agriculture and livestock rearing, it offered conditions of relatively easy movement in which natural resources and manufactured products could be readily exchanged. The most extensive area of savanna in Africa consists of a broad zone that stretches

from the Atlantic Ocean to the Gulf of Aden. This chapter is concerned with the western part of that zone, the savanna lands to the west of Lake Chad.

The West African savanna consists of grassland with varying densities of trees and shrubs, situated between the tropical rainforest to the south and the Sahara Desert to the north. In the past the Sahara formed what Bovill (1968: 1) called 'one of the world's greatest barriers to human movement', although, as Bovill showed, trade repeatedly breached that barrier. Beyond lay the lands of the Mediterranean, heart of the Roman and of the Medieval world, with contacts deep into Eurasia. To the south was the tropical rainforest and beyond that only the Atlantic Ocean, bordering a coast that until the middle of the second millennium AD was to remain isolated from the rest of the world. This is in contrast to the East African coast, discussed in [Chapter 8](#), where external contact is known to have been present for some 2,000 years. Much of the coast of West Africa is uninviting when approached from the sea: natural harbours are relatively few and most of the coast is fringed by mangrove swamps or exposed surf-pounded beaches or is backed by inhospitable desert. The real problem, however, is that south of Morocco, along the Saharan coast, the prevailing winds are always from the north. Given the technology of the ships of the ancient and Medieval worlds, it was possible to sail south but impossible to return (Mauny 1978: 292–3). As a result, Cape Bojador at about latitude 26° north remained effectively the furthest south to which outside ships were able to penetrate until towards the middle of the fifteenth century AD. It was only at that time that circumstances changed, because of the adoption of the lateen sail and of the stern-post rudder by seafarers of the western Mediterranean and Atlantic seaboard, which enabled ships to sail into the wind as well as with the wind. Bovill also emphasized the importance of the discovery that it was possible to return from the West African coast, not by fighting contrary winds along the coast but by striking west into the Atlantic to pick up winds blowing from the south and west. This discovery, discussed by Crosby (1986: 112–14), occurred about 1440 and was made possible, Bovill suggested, by the Portuguese adoption of the caravel, a vessel that was much more manoeuvrable than earlier ships (Bovill 1968: 115). The caravel had both lateen sails and a stern-post rudder.

If the ocean could remain a barrier for so long, it is perhaps surprising that so formidable a barrier as the Sahara Desert should have been successfully breached by trade at least eight centuries earlier. The fact that it was has often been explained as the result of another cultural innovation: the introduction to Africa of the domesticated camel as a mode of transport over long distances through arid regions (Bulliet 1975). It will be argued below that the 'ship of the desert', as the camel has been called, did not inaugurate trans-Saharan trade but, in the hands of people who knew how best to utilize its peculiar

physiology, it undoubtedly led to a very substantial development of that trade. The camel seems to have been brought into use in the Sahara during the first few centuries AD, coming originally from Arabia, although it appears to have been known in Egypt for many centuries previously (Rowley-Conwy 1988). It was not until after the seventh century AD, however, that the coming of the Arabs to North Africa brought about the development of trans-Saharan commerce based on the use of camel transport (Mauny 1978: 286–92).

It would be a mistake, however, to think of the West African savanna as merely a uniform zone, isolated to varying degrees through time by the desert, the forest, and the ocean. Rather, it was a world of its own and a highly complex world, richly endowed with resources. Indeed, the West African savanna consists of a parallel series of different environmental zones, running roughly from west to east and forming a part of a greater series of such zones extending from south to north across West Africa. These zones have usually been characterized in terms of vegetation differences; one of the best-known attempts to do this was the map produced by Keay (1959). Thus a hypothetical traveller, journeying north from the Nigerian coast, could traverse in less than 1,500 kilometres a whole range of environments, from coastal mangrove swamp to true desert (Fig. 6.1). On the way she or he would pass through tropical rainforest, forest–savanna mosaic, relatively moist woodlands and savanna, relatively dry woodlands and savanna, wooded steppe, and subdesert steppe. The close proximity of these different environments must have had an important influence on the development of human culture in West Africa. Because of the range of ecozones and ecotones that they presented, there was both the necessity and the occasion for the exchange of raw materials and products across environmental boundaries. Each environment possessed some resources but lacked others. Thus salt was available in the desert and along the coast but was relatively difficult to obtain in the savanna, where for cereal agriculturalists it was a physiological necessity (Alexander 1993b). Thus the forest was deficient in meat but the savanna supported very large numbers of domestic animals, particularly cattle (Buchanan and Pugh 1955: 120–3). There are many other examples, but the important point is that the complexity of the West African environment provided conditions conducive to the development of a complex network of regional trade. Within that network the West African savanna, relatively easy to traverse, played an essential part. It is likely that such trading activity was almost as old as West African food production, and, indeed, its remoter origins must have been even earlier.

Consider the main resources that would probably have been available in the West African savanna 2000 to 3000 years ago. Foremost of these would have been agricultural products: cereals such as sorghum, millet, fonio, and African rice; several indigenous yams; vegetable oils such as those

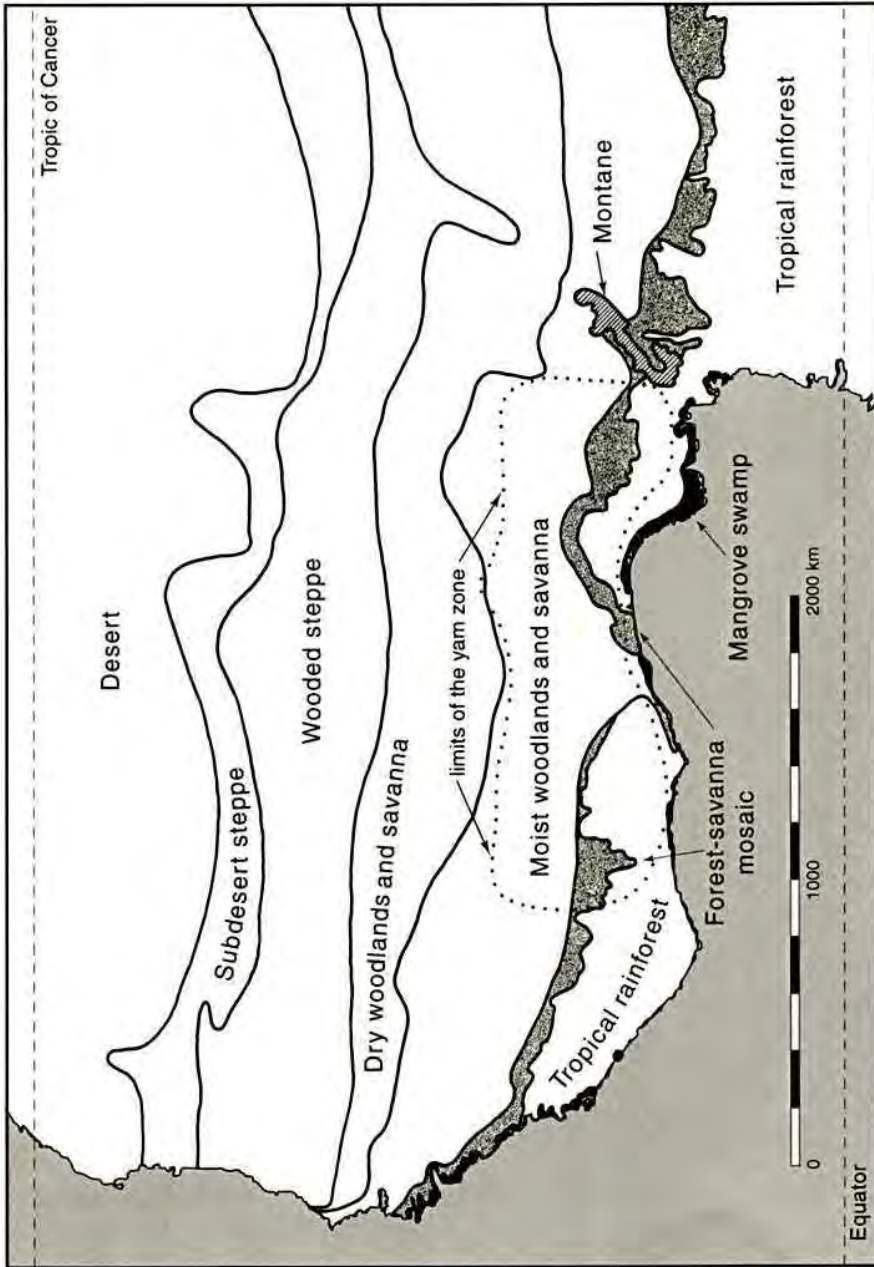


Fig. 6.1 West African environmental zones showing area of major yam cultivation. After Key 1959 and Coursey 1980; fig. 1.

obtained from the shea-butter tree and the oil palm; two African groundnuts; cowpeas; black beniseed; and other things (Harris 1976: 329–32). There would also have been meat, dairy products, and hides and skins from the numerous cattle, sheep, and goats. Furthermore, food supplies could have been supplemented by hunting wild animals and by fishing; such ‘wild’ resources could in addition have provided ivory. Moreover, a number of wild plants and trees could have contributed to human sustenance, particularly in times when cultivated crops failed, while at all times botanical sources would have been able to supply a wide range of useful raw materials, for baskets, canoes, medicines, roofing, and many other purposes (Dalziel 1937; Casey 1998). Important inorganic materials would have been available in the West African savanna, as well: in particular, iron ore, alluvial gold, rocks suitable for making grindstones, good building earths, and potting clays. Last, a relatively high population density would have provided a resource in itself that could have been exploited: the slave trade has a history in West Africa which goes further back than the advent of Europeans on the Guinea Coast (Alexander 2001).

Nevertheless, the West African savanna was a zone of constraints as well as opportunities. Foremost of these constraints was water availability. The rainfall is markedly seasonal, the amount less and the wet season shorter the further north one goes. Also the temperature increases as one goes north, leading to a greater loss of surface water to evaporation, so that much of the northern parts of the savanna consist for most of the year of a virtually waterless landscape. Although drinking water for both domestic animals and human beings is usually available by digging wells of varying depths, in such conditions the margins of perennial rivers and lakes assume an especial attraction for agriculturalists. It is in such areas that ‘floodwater farming’ in its various forms has been of great importance. Such farming techniques – of which ‘recessional cultivation’ (the cultivation of naturally watered areas as floodwaters recede) is probably the most common – were one of the principal ways of intensifying African agricultural systems. Such techniques seem to have underlain the growth of social complexity in the Egyptian Nile Valley, and in West Africa they existed (and still exist) both in the Inland Niger Delta in Mali (Harlan and Pasquereau 1969) and around the southern edge of Lake Chad (Connah 1985), as well as probably in other places. Nevertheless, there is a second environmental constraint in the West African savanna that sometimes discourages human settlement around the very bodies of water that attract it. Of the major diseases found in the savanna that can seriously damage human or animal health, sleeping-sickness and animal trypanosomiasis, malaria, schistosomiasis, filariasis, river blindness, and a range of intestinal parasites are associated in one way or another with water. Clearly the West

African savanna was no earthly paradise but did offer considerable opportunities to human groups that could adapt to its constraints.

Significantly, this interplay of opportunities and constraints was not static through time, because even over the last 3,000 years there have been variations in the West African climate which have had profound effects on human societies in the savanna. Although conditions in West Africa were becoming steadily drier from about 4,500 years ago, Brooks (1998) identified an arid period between about 300 BC and about AD 300, a period of increased rainfall from about AD 300 to about 1100, another dry period from about 1100 to about 1500, another period of increased rainfall from about 1500 to about 1630, and yet another dry period from about 1630 to about 1860. Dating these periods is uncertain, and in addition there have been frequent shorter fluctuations in rainfall, resulting in droughts similar to those of recent decades and sometimes more severe (Shanahan et al. 2009). Within the savanna, economic and social responses to these changes have tended to be characterized by stability and growth during moister periods, and instability and decline during drier periods. This is to claim not that climate has been deterministic, but that it has been one of the factors that have shaped the complex dynamic relationship of people and environment.

Sources of information

Historical evidence

Until late in the twentieth century, knowledge of the precolonial cities and states of the West African savanna was mainly based on historical sources. Some of these originated as oral traditions, but many of them consist of documentation, usually in Arabic and mainly written by outsiders who at best had only visited the area. The principal of these were al-Masudi, ibn Hawqal, al-Bakri, al-Idrisi, Yaqut, al-Umari, ibn Battuta, ibn Khaldun, Leo Africanus, al-Maqrizi, ibn Said, al-Sa'di, and ibn Fartua. Collectively they throw light on the period roughly from the tenth century AD to the seventeenth century. Similar sources also provide brief references to the West African savanna back to the eighth century AD. Drawing on all these and other sources (including the writings of mainly nineteenth-century European travellers, such as Park, Denham, Clapperton, Caillié, and Barth), modern historians have been able to reconstruct, in varying degrees of detail, the history of the most important states of this area over the last 1,200 years or so. For example, Nehemiah Levtzion (1973) examined the old states of Ghana and Mali, and John Hunwick (1971) those of Songhai, Borno, and Hausaland. In fact, there exists an extensive literature on the history of the regions that were known as the

Western and Central Sudan. It is the character of the sources on which that literature is based, however, that for a long time determined the standard explanation of the development of cities and states in the West African savanna. That explanation was most clearly stated by Levtzion:

Sabil is the Arabic word for 'shore', which is well understood if the desert is compared to a sea of sand, and the camel to a ship. Hence, the towns which developed in the Sahel ... may be regarded as ports. These towns became both commercial entrepôts and political centres. Those who held authority in these strategic centres endeavoured to extend it in order to achieve effective control over the trade. Thus trade stimulated a higher level of political organization, while the emergence of extensive states accorded more security to trade. Political developments in the Western Sudan, throughout its history, are related to the changing patterns of intercontinental and trans-Saharan trade routes. (Levtzion 1973: 10)

In other words, cities and states in this zone developed as a result of external stimulus, in the form of long-distance trade. In addition, this view usually emphasized the role of Islam in these developments. Such an explanation might be expected, of course, if sources are limited to post-eighth-century AD documents written by people of Islamic culture, who mostly belonged to lands beyond the Sahara. As a view of the later developments in the West African savanna, it is no doubt sound, but does it adequately explain the origins of these developments? Fortunately, there is another source of information that has neither the chronological limitations of the historical sources nor their possible prejudices: this consists of archaeological evidence, a source that deserves more attention than formerly (Fig. 6.2).

Archaeological evidence

The archaeology of the West African savanna is still limited by insufficient fieldwork and excavation. Furthermore, much of the earlier work was technically inadequate and publication was often poor or absent. There was also a tendency to adopt research strategies designed to throw more light on historically known sites. Mauny (1961) synthesized this earlier work, but so little was known about the archaeology of the area that in 1979 McIntosh and McIntosh (1979: 227) called the three millennia preceding the earliest historical documentation the 'silent millennia'. Similarly, Mauny himself used the phrase 'les siècles obscurs' (the obscure centuries) in the title of a book about the interface of history and archaeology in tropical Africa (Mauny 1970).

Nevertheless, archaeological research in the West African savanna is now throwing new light on the origins of cities and states in this area. Perhaps the

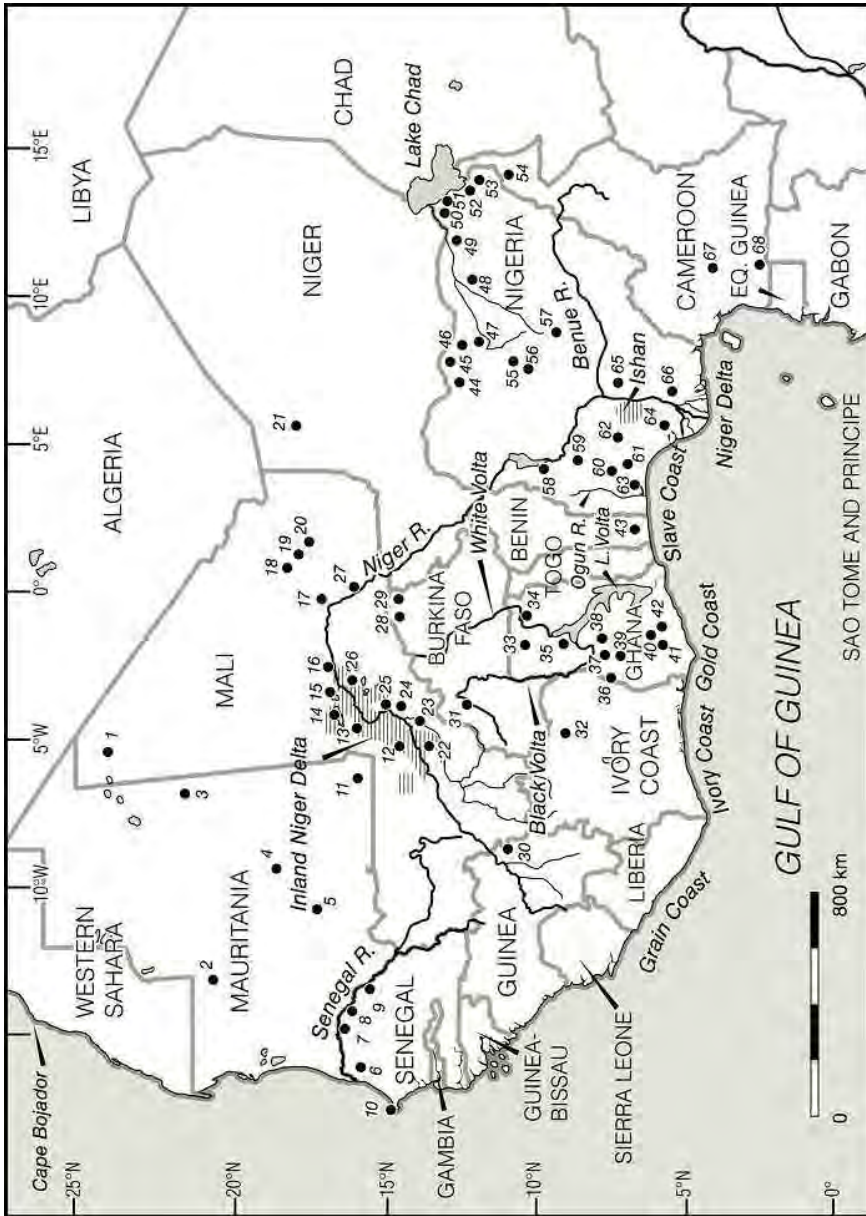


Fig. 6.2. Principal archaeological sites and places in West Africa mentioned in the text. This map is relevant to both Chapters 6 and 7. 1, Teghaza; 2, Azugi; 3, Majābat Al-Koubrā; 4, Tichitt; 5, Tegdaoust; 6, Rao; 7, Siouré; 8, Cubalel; 9, Sincu Bara; 10, Dakar; 11, Koumbi Saleh; 12, Dia; 13, Tondidarou; 14, Kouga; 15, Koi Gourrey; 16, Timbuktu; 17, Karkarichinkat; 18, Essouk-Tadmakka; 19, Talohos; 20, Kidal; 21, Azelik; 22, Jenné; 23, Galia; 24, Doupwil; 25, Hamdallahi; 26, El-Oualéjji; 27, Gao; 28, Oursi hu-beero; 29, Kissi; 30, Niani; 31, Kinikongo; 32, Kongs; 33, Daboya; 34, Birimi; 35, New Buipe; 36, Begho; 37, Nsawkaw; 38, Kintampo; 39, Bono Manso; 40, Kumasi; 41, Adansemanso and Asantemanso; 42, Lake Bosumtwi; 43, Abomey and Cana; 44, Katsina; 45, Durbi Takushevi; 46, Daura; 47, Kano; 48, Dufuna; 49, Birnin Gazargamo; 50, Gajiganna; 51, Zilum; 52, Kursakata; 53, Daima; 54, DGB sites; 55, Zaria; 56, Turunku; 57, Nok; 58, Bussa; 59, Old Oyo; 60, Oyo; 61, Ife; 62, Iwo Eleru; 63, Ijebu-Ode; 64, Benin City; 65, Nsukka; 66, Igbo-Ukwu; 67, Obobogo; 68, Akonétye. Drawn by Joe LeMonnier.

earliest sign of complex societies in semi-arid West Africa is the appearance, from about 4000 BC, of what MacDonald (1998) termed 'Mobile Elites', based on transitory accumulations of pastoral wealth and power. This development is represented in the archaeological record by evidence for cattle herding, the making of valued objects in polished stone, and the construction of mounds – some for burial and others for the ritual disposal of objects belonging to the deceased. MacDonald suggested that, in favourable regions, additional climatic or cultural stimuli resulted in these Mobile Elites developing into semi-sedentary chiefdoms by about 1500 BC. One of these, he claims, was in the Dhar Tichitt-Walata area, in south-eastern Mauritania, where Holl (1985) studied a large series of drystone-built settlement sites dating from about 4,000 to about 2,000 years ago, which are strung out along more than 100 kilometres of sandstone cliffs. Towards the end of their occupation these sites formed a settlement hierarchy of four ranks: seventy-two hamlets with less than twenty compounds each, twelve small villages with twenty to fifty compounds each, five large villages with 120 to 198 compounds each, and one regional center, Dakhlet el Atrous I, measuring 92.75 hectares with 590 compounds, which could be described as a city. The communities in these settlements practised mixed farming based on grain cultivation (particularly bulrush millet: *Pennisetum* sp.) and the herding of cattle, sheep, and goats. They also exploited wild grains and fruits, fished in the freshwater lakes that then existed, and hunted a range of wild animals. Climatic deterioration almost certainly played a part in concentrating population into this area. It also eventually led to the abandonment of the settlements and their survival as archaeological sites, providing us with some of the earliest indications of developing social complexity in the West African savanna and the adjacent Sahara (Fig. 6.3).

The ideas of MacDonald and Holl challenged previous ideas about the processes and timing of social change in West Africa. Perhaps the greatest challenge, however, came from the work of Susan and Roderick McIntosh in the late 1970s and early 1980s on the settlement mounds of the Inland Niger Delta of Mali (McIntosh and McIntosh 1980; McIntosh 1995; McIntosh 1998; 2005). By combining regional surface investigations with excavations at the sites of Jenné-jeno, Hambarketolo, and Kaniana, the McIntoshs were able to trace the emergence of urbanism in this area, from its apparent origins in about the third century BC to the foundation in the early second millennium AD of the nearby historical city of Jenné. At Jenné-jeno the settlement had grown to at least 12 hectares by about the first century AD and reached its maximum extent of 33 hectares by about the ninth century (Fig. 6.4). At this latter stage it consisted of a packed mass of compounds, containing both round and rectangular mud houses, that was surrounded by a

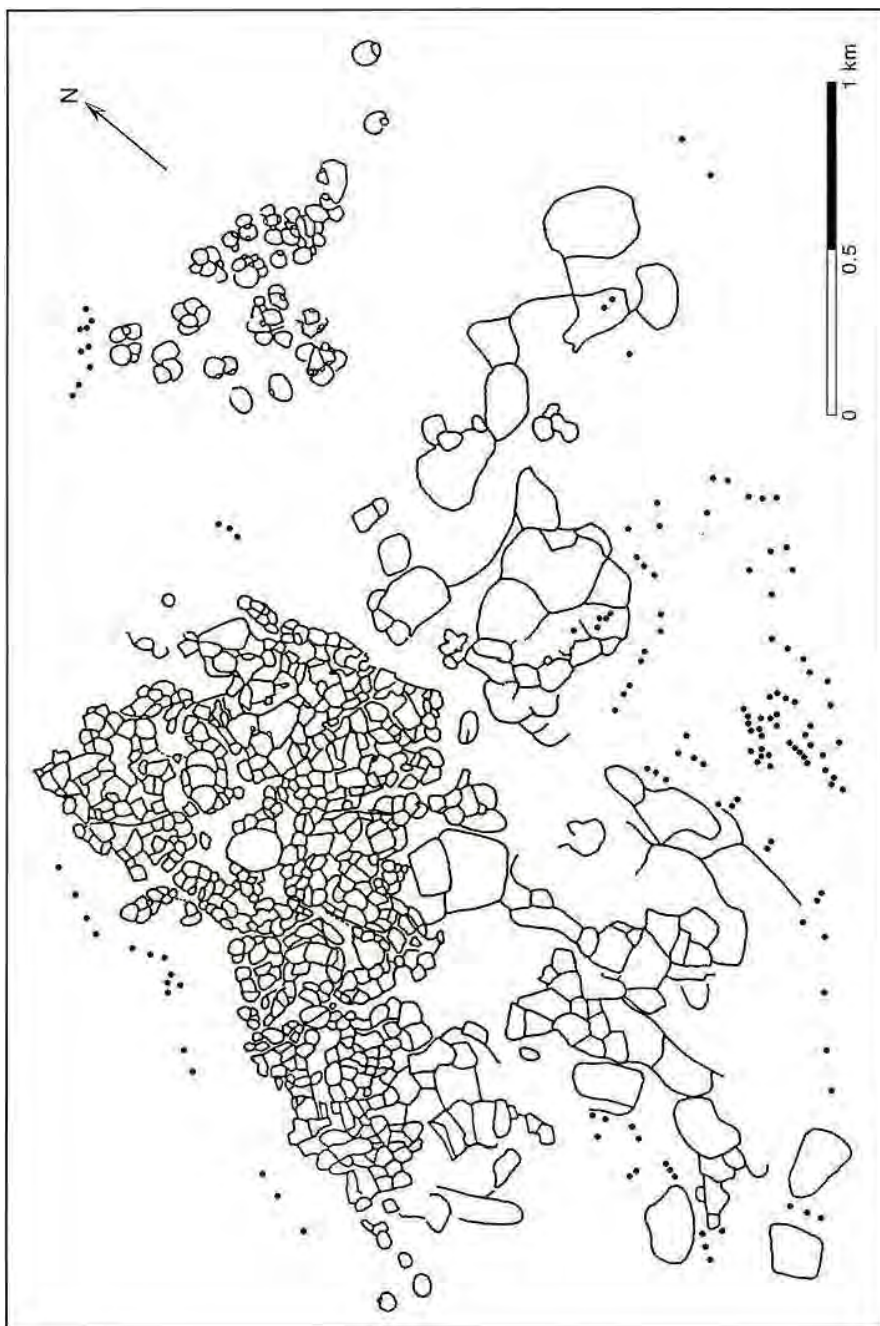


Fig. 6.3 Plan of Dakhlet el Atrous I, Mauritania, the largest Dhar Tichitt settlement site, 92.75 hectares in size. The dots represent tumuli, and the enclosures are stone compound and corral walls, not houses. After MacDonald 1998: fig. 4.5.

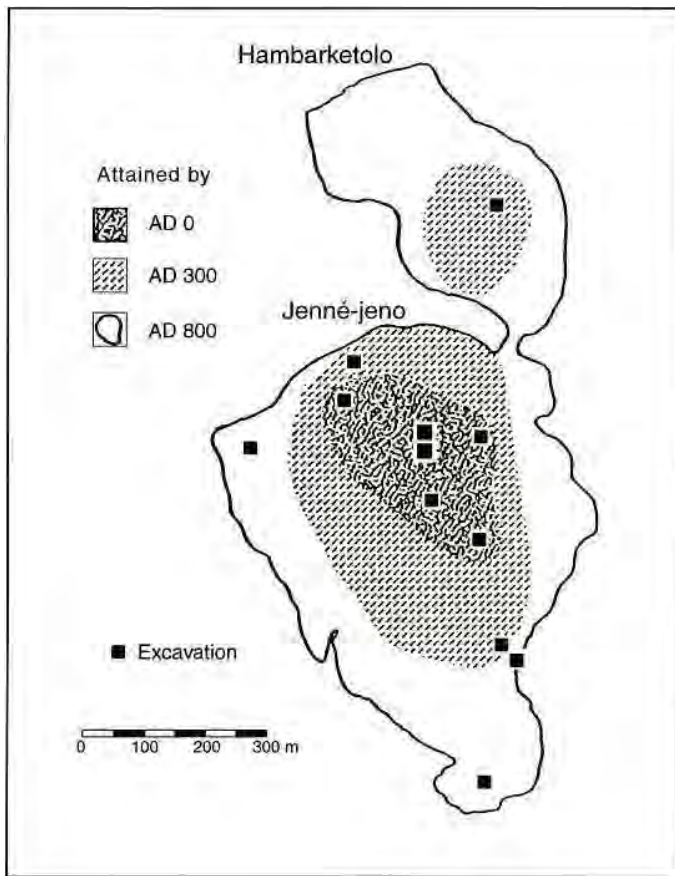


Fig. 6.4 Plan of Jenné-jeno, Mali, showing growth. After McIntosh 1995: fig. 10.3.

mud-brick city wall some 2 kilometres long. Its population has been estimated at between 4,800 and 12,800, and if the adjacent site of Hambarketolo is included, along with twenty-five other contemporary satellite sites clustered around Jenné-jeno within a 1-kilometre radius, a population of 10,000 to 26,700 is possible. Although such a high density might have been exceptional, this is only a relatively small part of the Inland Niger Delta, suggesting that there was an overall population buildup in the area from late in the first millennium BC to early in the second millennium AD. Excavated evidence from Jenné-jeno suggests that the economic base for this development consisted of mixed farming on the seasonally inundated floodplain and its margins, particularly involving rice and cattle, but it is apparent that fishing, hunting, and the gathering of wild plant food were also important.

In addition, both metallurgy and other craftsmanship were well developed, and Jenné-jeno participated in a trading network with a radius of at least 350 kilometres. Yet so far as any external stimulus is concerned, such as that suggested by Levtzion, 'Jenné-jeno is too big, too early, and too far south' (McIntosh and McIntosh 1980: vol. 2, 448).

Although the evidence from Jenné-jeno has established a convincing case for the indigenous development of urbanism in the Inland Niger Delta, it has not demonstrated the existence there of a stratified sociopolitical hierarchy or centralized authority (McIntosh and McIntosh 1993a), unless it is argued that the construction of the city wall indicates the latter. As a result, the site provides little information about the origins of state formation in the West African savanna. Possibly we should reexamine our theoretical assumptions, as the McIntoshs have suggested, but the amount of excavation that has been done is still very small considering the size and number of the sites involved. This is a characteristic problem of urban archaeology, although one that systematic multiple coring of deposits might eventually overcome to some extent. Nevertheless, the homogeneity of material culture over a considerable area of the Middle Niger, the existence of a three-tier settlement hierarchy in the Jenné-jeno area, and a positive correlation of site size with surface artefact diversity on sites within a 4-kilometre radius of Jenné-jeno suggest that at its maximum development the city might indeed have formed the centre of a sociopolitical or economic development larger than its own immediate urban environment (McIntosh 1995: 410). However, R.J. McIntosh (2005: 187) has argued that this was not a hierarchy but 'a highly complex society organized horizontally, a heterarchy, with multiple overlapping and competing agencies of resistance to centralization'. This is an important idea that calls into question the traditional ideas of urban hierarchical evolution, for both Africa and some other parts of the world.

Archaeological field research in other parts of the Middle Niger and adjacent regions has shown that past urban development was no isolated phenomenon. In the Timbuktu region, for instance, surface and excavated evidence indicate settlement growth in the first millennium AD, although followed by decline caused by increasing aridity (Post Park 2010). The same seems to have occurred in the Méma region to the west of the Inland Niger Delta (Togola 2008), and probably also in the Lakes Region of the Middle Niger (McIntosh 1994: 178). However, Gao Ancien, on the Niger to the east of Timbuktu, revealed a sequence of archaeological deposits from the sixth or seventh century AD to the fifteenth or sixteenth century (Insoll 1996a: 41). Subsequent work, at both Gao Ancien and the nearby site of Gao Saney (Sané on p. 180), indicated occupation beginning in the seventh or eighth century and produced substantial evidence for

long-distance trade in glass beads and copper during the eighth to tenth centuries (Cissé et al. 2013).

More than 1,000 kilometres to the north-west, the Middle Senegal Valley has presented a different picture from that of the Middle Niger. Although this is also a floodplain initially colonized about 2,000 years ago, which has a large number of clustered settlement mounds, most Middle Senegal Valley sites remained small, and the excavated evidence from Cubalel and Siouré indicates a small-scale society that changed little throughout the first millennium AD. Only at the end of that millennium did major changes in scale and complexity take place, at the same time as a sudden expansion of trading contacts, changes that led to the emergence of the so-called Takrur Empire at the beginning of the second millennium AD. It has been suggested that this contrast in the organization of society, on the Middle Niger and the Middle Senegal, resulted from differences in the distribution of land-forms. Evenly distributed subsistence opportunities on the Middle Senegal favoured an even distribution of population in small groups, whereas on the Middle Niger a very uneven distribution of such opportunities encouraged more specialization. Jenné-jeno and a number of other settlements, such as Kalifa Gallou (40 hectares), Dia (50 hectares), Toladie (85 hectares), and Soy (110 hectares), grew up as urban centres because of their unusually advantageous positions (McIntosh et al. 1992; McIntosh 1994: 178–9). An apparent exception in the Middle Senegal Valley is the site of Sincu Bara, of the first millennium AD, 67 hectares in extent with occupation deposits up to 3 metres in depth but lacking obvious mounds (McIntosh and Bocoum 2000).

The success of the McIntoshes' research stems at least in part from their early realization that:

the most effective way to investigate the appearance and development of the pre-colonial town in West Africa is not to excavate only the town site, but to document and explain the evolution of the settlement hierarchy of which the town is the summit. (McIntosh and McIntosh 1980: vol. 2, 346)

Instead, much of the field research by other archaeologists, particularly the older work, has tended to focus on the sites of cities or towns which can, with varying degrees of certainty, be identified in the historical sources (Fig. 6.2). For instance, important excavations have been conducted at Tegdaoust, in the Mauritanian desert, of which the main site is 12 hectares in size. Work over many years revealed multiple phases of occupation, much of it the remains of stone buildings provided with facilities including wells, hearths, and latrines (Fig. 6.5). The earliest phase was preurban, and the entire occupation is thought to extend from the seventh to the sixteenth century AD (Holl 2006

summarizes earlier publications). The site has been identified with the historically known town of Awdaghost, which was a desert port-of-trade on one of the trans-Saharan routes. The excavated evidence indicates that Tegdaoust became a flourishing Islamic town, heavily involved with trade beyond the desert. In contrast, the site of Niani, in Guinea, is of uncertain significance. Its excavator claimed it to have been the capital of the old state of Mali, but excavations did not reveal the wealth of Arab imports that might have been expected (Filipowiak 1969). Other writers suggested that the real capital was much further to the north-east; Conrad (1994) argued that its location changed more than once. The radiocarbon dates for Niani are from the sixth to the tenth centuries AD and suggest a reoccupation in about the sixteenth and seventeenth centuries (Calvocoressi and David 1979: 15–16, 23; Sutton 1982: 306, 311). The gap in these dates further reduces the likelihood that this was the capital of the state of Mali at the height of its power in the fourteenth century, although Holl (2006: 2–3) appears to think that it could have been.

However, the site of Koumbi Saleh, in Mauritania, is thought by most scholars to have been the capital city of the old state of Ghana. Excavations have been conducted there on a number of occasions, some of the earliest being those of Thomassey and Mauny (1951; 1956). This site, of 49 hectares with stone buildings of several storeys and extensive cemeteries, is clearly of great importance. Although Thomassey and Mauny failed to explore its lower occupation levels, excavations by Robert and Robert (1972) and later by Berthier have remedied that omission. There are now radiocarbon dates for the site extending from the ninth to the fifteenth century AD (Berthier 1997: 102; Holl 2006: 13). The problem with Koumbi Saleh is that in the eleventh century al-Bakri described it as consisting of two towns: an Islamic town and a royal town (Levtzion 1973: 22–3). Unfortunately, it seems that it is the Islamic town that has been excavated; evidence for indigenous origins would be more likely to be found in the native town than in the strangers' town.

An important excavation of an early West African urban complex was conducted in 2005 at the site of Essouk-Tadmakka, in Mali (Nixon 2009). This was a major Saharan trading town at a place first mentioned by Ibn Hawqal in the tenth century AD. Its main site covers 50 hectares, and excavation at the EKA location in its centre revealed horizontally stratified deposits 6.5 metres in depth, containing the remains of both dry-stone and *pisé* structures dating from the middle of the first millennium AD to c. 1400. Excavation at this location and at EKB and EKC shed light on the changing scale of trade over time, in particular providing unprecedented eighth- and ninth-century AD evidence for extensive trade. The investigations were also informative about

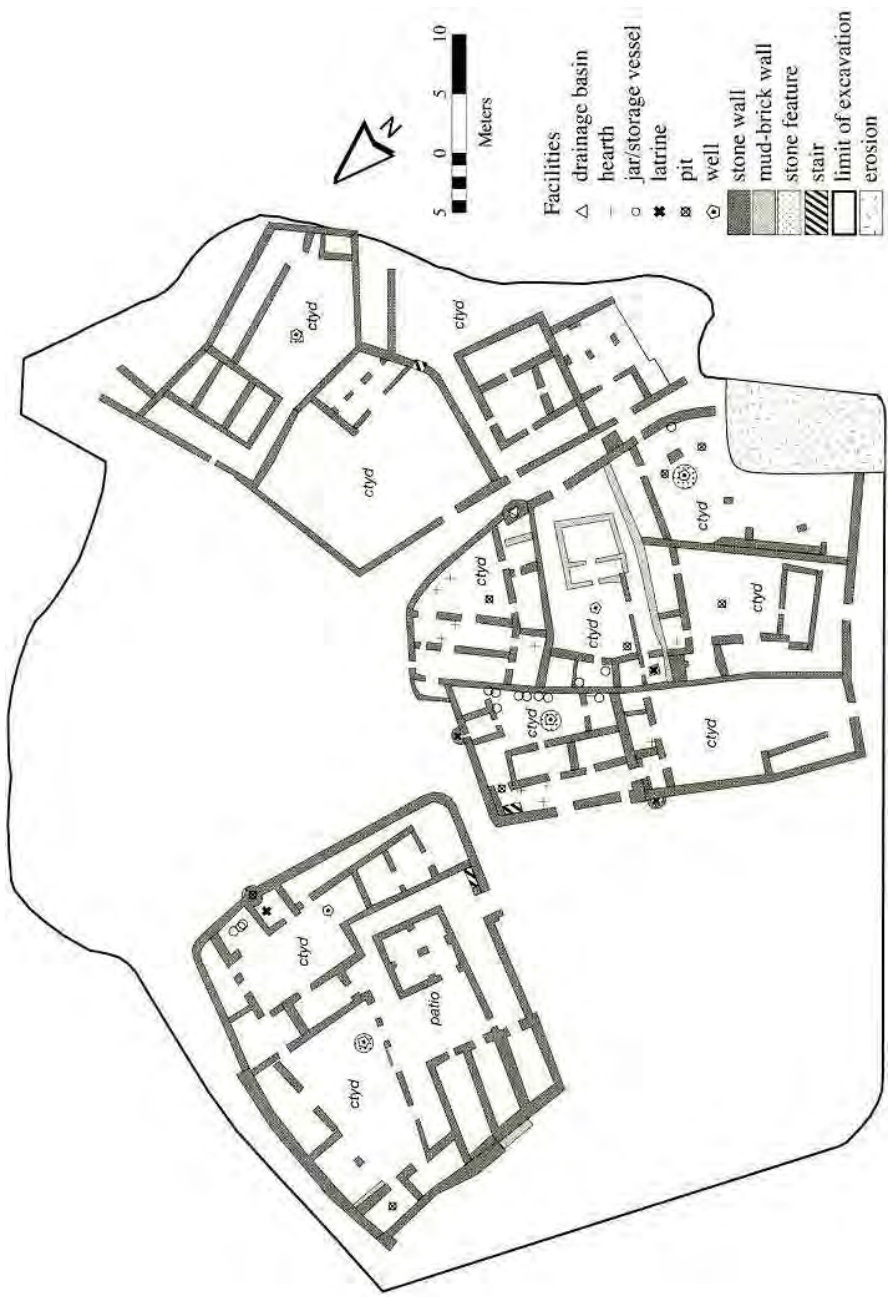


Fig. 6.5 Plan of Building Sequence 6, eleventh century AD, at Tegdaoust, Mauritania. This shows the site in its most developed stage. After Holl 2006, fig. 13.

the character of the Saharan trade, the town being advantageously situated in the Sahel, on the route from North Africa to the Niger Bend. The discovery in the EKA excavation of coin moulds containing traces of gold, dated to the ninth to tenth century AD, is evidence of the early development of the gold trade and of the first coins in West Africa, although probably these were only blanks that were subsequently minted in North Africa (Nixon et al. 2011). Social conditions in the town are indicated by carefully built living spaces in EKA and also by a latrine pit in the EKB excavation.

There are many other archaeological sites of cities or towns that can be identified, or tentatively identified, in the historical record. Although excavations have been conducted at some of these places, they have tended to be limited in scale and to concentrate on second-millennium Islamic deposits. Examples include Azelik (Niger), possibly Takedda visited by ibn Battuta in 1353 (McIntosh and McIntosh 1984: 85); Birnin Gazargamo (Nigeria), capital of Borno dating from the fifteenth century AD (Bivar and Shinnie 1962; Connah 1981); Kong (Ivory Coast), a trading town dating from the sixteenth century AD (Sutton 1982: 306–7, 311); and Hamdallahi (Mali), which lasted for only a few decades in the nineteenth century but has been called the biggest city of precolonial West Africa (Gallay et al. 1990; Mayor 1996). Other places that have been subject to excavation are Azugi, in Mauritania, and Marandet, in Niger (Holl 2006). Kano, Zaria, and Katsina in Nigeria have not yet attracted significant attention from excavators.

In addition to those historically known, there are numerous other large settlement sites. For example, excavations at the settlement mound of Tongo Maaré Diabal, on the eastern edge of the Middle Niger area, have shown that this 9-hectare ‘town’ was occupied from about AD 200 to about 1200. Also, work by Bedaux and others (1978) on the two settlement mounds of Doupwil and Galia in the Inland Niger Delta revealed settlements that were first occupied in the eleventh century AD. Each of the latter sites were probably about 8 hectares in area, before erosion, compared with the approximately 12 hectares of Tegdaoust. Other settlement mounds of importance are those south of Lake Chad, on the *firki* clay plains of north-east Nigeria (Daima is the best known), some of which constitute the remains of quite large settlements whose origins lie in the first millennium BC (Connah 1981). These are only part of a group of 822 known mounds that also extend across northern Cameroon and into south-western Chad (Holl 1996: 581). Although many of the settlements represented by these mounds were probably too small to be considered urban, they are nevertheless relevant to an investigation of West African urban origins in the context of a McIntosh regional settlement hierarchy. In northern Cameroon, for instance, Holl (1996: 589) suggested a settlement hierarchy of at least three

levels: 'open mounds of different but generally small size; walled sites, former village chiefdoms and later district centres; and finally paramount central settlements'. Examples of the central settlements were from 7 to more than 20 hectares in area, and probably represent the origins of the walled cities and small states that were historically recorded in this region from the sixteenth to the nineteenth century AD (Gronenborn 2001). Also indicative of sociopolitical change in the same region are the sixteen so-called DGB sites in the Mandara Mountains of northern Cameroon. These remarkable dry-stone structures, consisting of platforms, terraces, and other features, appear to date from about the fifteenth century AD, are mostly less than 4 hectares in size, and remain of uncertain function. Nevertheless, their construction required substantial labour and skill that suggest growing social complexity (MacEachern and David 2013).

Enclosing settlements with walls of stone or earth, with banks and ditches, or merely with timber palisades or naturally grown vegetation seems to have been widespread in Africa over the last 3,000 to 4,000 years (Connah 2000a; 2000b) but became particularly common in West Africa during the second millennium AD. Probably this resulted from increased competition for resources, as populations expanded or environmental conditions deteriorated. In the West African savanna many towns and cities sought to protect themselves in this way, especially with the increasing use of horses in warfare from the thirteenth or fourteenth century onwards. By about the ninth century, however, Jenné-jeno was already walled. Much earlier is the evidence of a fortified settlement at Zilum, in north-east Nigeria, in the middle of the first millennium BC (Fig. 6.6). This was a settlement of 12 hectares, with an estimated population of 1,750 to 2,500. A combination of magnetic survey and excavation revealed the details of this site, a reminder of how much might be learned if a similar methodology was used at other large settlement sites (Magnavita et al. 2006).

Although primarily a protective strategy, almost certainly the enclosing of large settlements had other functions as well: it assisted in the governance of the inhabitants, made taxation and control of trade easier, clearly distinguished city-dwellers from outsiders, and imparted prestige to rulers. It has also provided archaeologists with important physical evidence. The surviving remains of these enclosures should have encoded in them information about many aspects of the societies that constructed them. Archaeological investigation of those remains might be able to throw light on the size and shape of a former settlement and on changes through time in that size and shape, as well as on numerous other matters. Appropriate research strategies include mapping of city enclosures, giving attention to location, layout, and structural sequence, and the excavation of sections through the remains of such

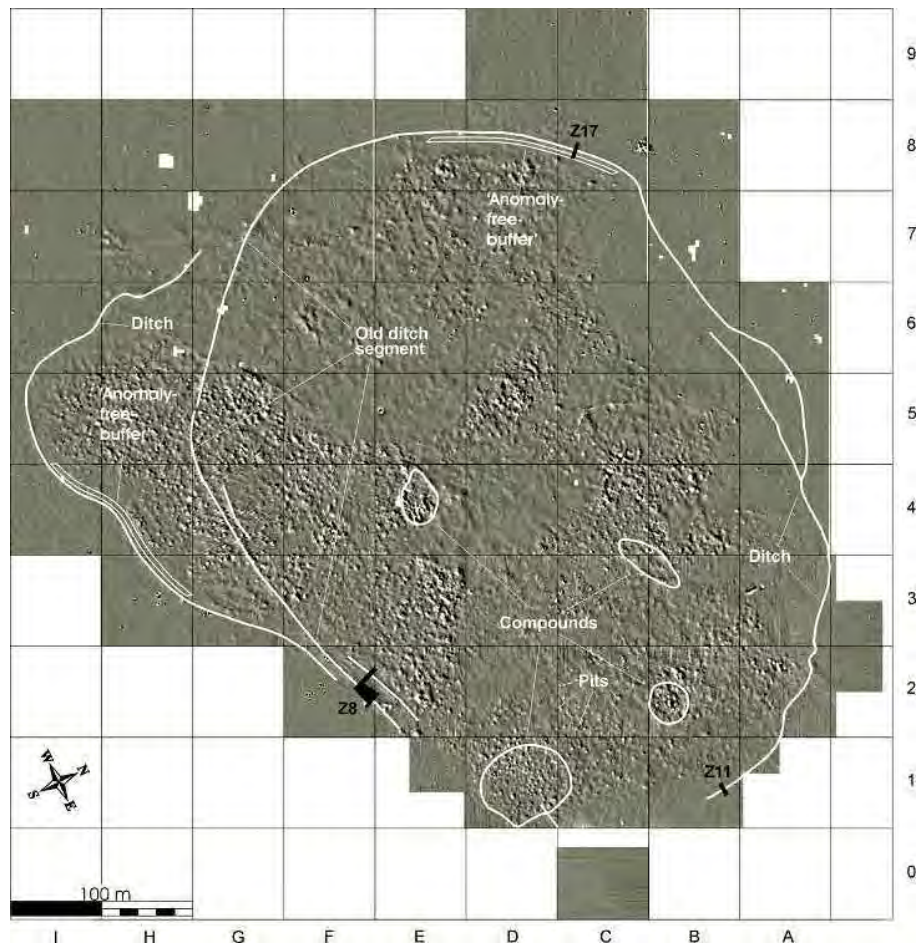


Fig. 6.6 Magnetogram of the settlement at Zilum, north-east Nigeria, showing the enclosing ditch and other features. The ‘anomaly-free-buffer’ is probably the location of a vanished bank or wall. Z8, Z11, and Z17 indicate test excavations of the ditch. From Magnavita et al. 2006, fig. 5. Reproduced by permission of Africa Magna Verlag, Frankfurt am Main.

structures and especially through the accumulated silt of any accompanying ditch or ditches. However, relatively little such work has been done, and the evidence is fast disappearing (Connah 2000a).

An example that has been investigated to some extent is the formerly massive city wall of Kano in the north of Nigeria, apparently constructed of both mud-bricks and dumped earth. In the mid-1820s Captain Hugh Clapperton recorded it as about 24 kilometres in length, with fifteen entry gates and with heights of more than 9 metres and a dry ditch on both the

inner and outer sides (Denham et al. 1826, Clapperton's Narrative, 50). In 1885 Paul Staudinger claimed the wall to be 'probably twenty metres high' (Staudinger 1889, trans. Moody 1990: vol. 1, 210), and Frederick Lugard, faced with the task of storming the wall in 1902, admitted: 'I have never seen, nor even imagined, anything like it in Africa' (Lugard 1903: 28). It is therefore fortunate that we do have a surface archaeological study of the remains of the wall as they were in the mid-1960s, in which they were assessed in the context of the oral and documentary record (Fig. 6.7). This study, by H.L.B. Moody, identified three phases of growth in the Kano wall system: in the eleventh to twelfth century AD, the late fifteenth century, and the seventeenth century, a sequence documenting the growing size and importance of the city (Moody n.d. [1970]). Sadly, there have been few attempts to emulate this work, at least so far as accessible publications indicate, although the 6-square-kilometre walled site of Turunku, near Zaria in northern Nigeria, has been the subject of a preliminary study (Effah-Gyamfi 1986). The seriousness of this omission may be judged from the fact that in 1904 Lugard reported that there were forty walled cities within a 48-kilometre radius of Kano alone (Moody n.d. [1970]: 18). Clearly, field survey and excavation of the precolonial city and town walls of the West African savanna have the potential to add significantly to our understanding of the origins and development of urbanization in the region.

In addition to settlement sites, there are numerous burial sites that can provide information about the growth of social complexity in the West African savanna. Best known of these are tumuli, or burial mounds, which are found particularly in Mali but also occur as far west as the coast of Senegal and as far east as the extreme north of Nigeria. McIntosh and McIntosh (1980: vol. 1, 31-6) distinguished three types of burial mound in Mali: stone tumuli, in the Sahara; earthen tumuli, in the dry savanna to the west and east of the Inland Niger Delta; and tumuli covering rock-cut tombs, in the wooded savanna. It is the earthen tumuli, dating principally to the late first and early second millennium, which have provided the most relevant evidence for our inquiry. Both the size of these tumuli and the grave goods buried with the dead indicate differences in social status. Indeed, some of the larger earthen tumuli appear to have been remarkable structures. Thus some of them had their outer layers of clay baked rock-hard by numerous small fires that were lit on the mound surface. An example of such a tumulus is the 15- to 18-metre-high mound of Koi Gourrey (also known as Killi) in Mali (Desplagnes 1903), where two individuals had been buried with varied grave goods and with twenty-five to thirty other people, presumably sacrifices. Equally impressive was the tumulus of El-Oualedji, also in Mali, which was 12 metres high and contained a

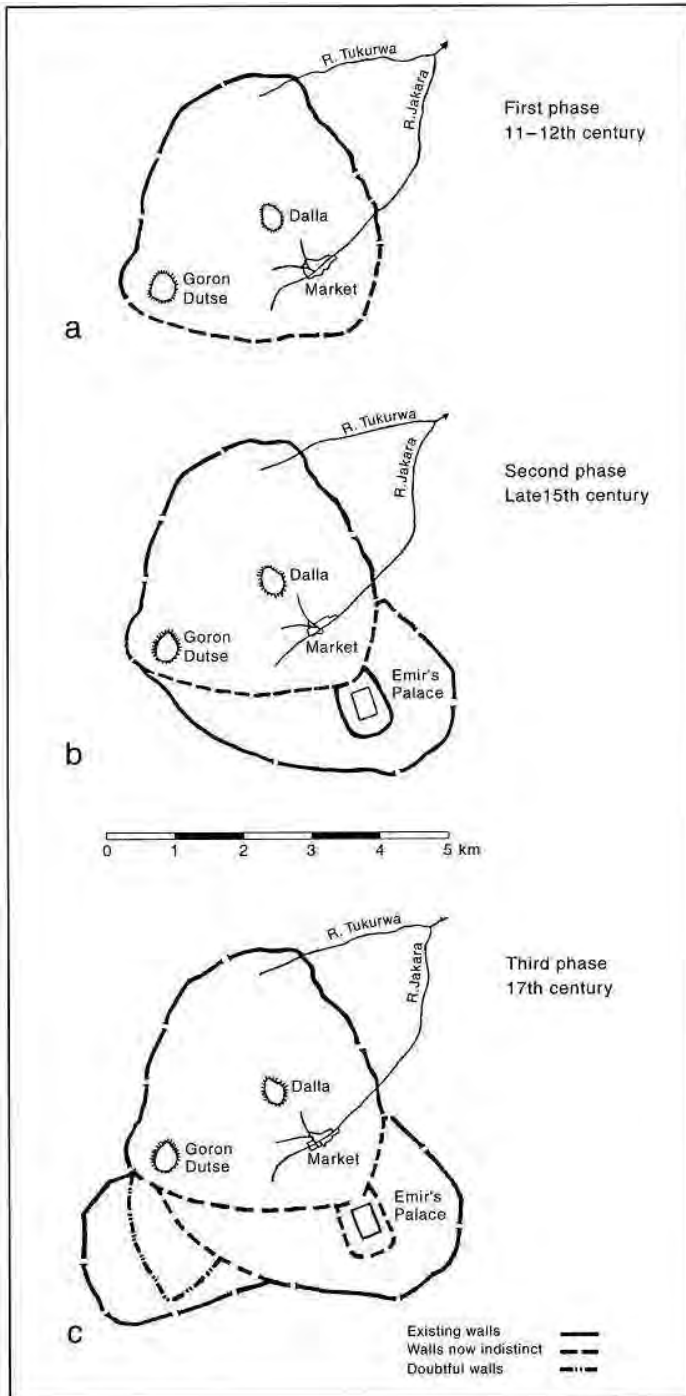


Fig. 6.7 Plans of the Kano city walls, Nigeria, from a survey in the mid-1960s, identifying three phases of growth (a, b, and c). After Moody n.d. [1970]: 39-41.

wooden funerary chamber, in which two individuals had been buried with accompanying objects (Desplagnes 1951; R. J. McIntosh 1998: 224–7). These, and perhaps a small number of other tumuli, indicate burial rites of the sort recorded by al-Bakri in the middle of the eleventh century for the kings of the state of Ghana:

When the king dies, they build a huge dome of wood over the burial place. Then they bring him on a bed lightly covered, and put him inside the dome. At his side they place his ornaments, his arms and the vessels from which he used to eat and drink, filled with food and beverages. They bring in those men who used to serve his food and drink. Then they close the door of the dome and cover it with mats and other materials. People gather and pile earth over it until it becomes like a large mound. Then they dig a ditch around it so that it can be reached only from one place. (al-Bakri, as quoted by Levtzion 1973: 25–6)

Indications of the age of these large earthen tumuli are provided by radiocarbon dates: the early eleventh century AD for El-Oualedji (McIntosh and McIntosh 1986: 428, 439); the tenth to eleventh century for a tumulus at Kouga, in Mali (McIntosh and McIntosh 1980: vol. 1, 31); the eighth to the eleventh century for three tumuli at Toyla, Tissalaten, and Kawinza, in the Lakes Region of the Inland Niger Delta (McIntosh and McIntosh 1986: 428–9, 439); and the seventh century for tumuli associated with the Tondidarou standing stones, in Mali (Saliège et al. 1980; McIntosh and McIntosh 1986: 428, 439). It has been suggested that some of the grave goods from these mounds reflect ‘the increasing wealth and power of groups controlling the flow of trade goods along the Middle Niger’. Possibly this increasing social stratification, plus the development of iron production in the Lakes Region and in the adjacent Méma region and the urban growth of Jenné-jeno, were all related in some way to the consolidation of the Empire of Ghana.

Perhaps the most impressive burial evidence comes from a number of tumuli in the Rao region of north-west Senegal, north-east of Dakar. These mounds yielded a remarkable collection of grave goods, including jewellery of silver and gold; one item of gold is a decorated disc of exceptional workmanship, 184 millimetres in diameter and 191 grams in weight. There were also an iron sword, beads, and objects of copper (of which two were Moroccan lidded bowls). These finds have been dated to a period for the northern Senegalese tumuli from the tenth century AD, continuing into the second millennium (Joire 1955; McIntosh and McIntosh 1993b: 104). It is thought that there were until recently more than 10,000 tumuli in Senegal, and collective inhumations often with rich grave furnishings have been found in a number of them (McIntosh and McIntosh 1993b: 75). The southern tumuli have been dated to approximately AD 700 to 1000, possibly earlier than those to the north but

later than the earliest of the numerous megalithic sites, with which they overlap in time and space (McIntosh and McIntosh 1993b: 104–5). Found in both Senegambia and Mali, these arrangements of standing stones, in Senegambia apparently with associated burials and evidence of human sacrifice (Gallay et al. 1982), have proved difficult to date, but radiocarbon and pottery analysis suggest that they belong principally to the second half of the first millennium AD and the first half of the second (Gallay 2010). Collectively, the wealthy burials and monumental funerary structures of Senegal suggest increasing social differentiation by people who were in touch with both the gold-producing areas to their south and the Arab markets of the Mediterranean world to the north. Perhaps this is an archaeological expression of state emergence, in this case of the so-called Empire of Takrur (p. 161) or of some related polity.

Far to the south-east, between Katsina and Daura in northern Nigeria, the tumuli of Durbi Takusheyi also provide evidence of an elite, in this area relating to the emerging Hausa city-states of the fourteenth to sixteenth centuries AD (Griffeth 2000). Excavation of three of the at least eight mounds at this site revealed a single burial in each. Copper, bronze, brass, iron, silver alloy, and gold grave goods accompanied these, as well as cowries, glass beads, carnelian beads, ivory bracelets, and the remains of textiles (Fig. 6.8). The copper/copper alloy items included bracelets and anklets, buckets, and other items including bowls, one of which is inscribed in Arabic (p. 67) and indicates trading contacts with North Africa or further afield (Fig. 3.10). Two of the buried individuals are presumed to have been interred in a seated position and were possibly male; the third was accompanied by two earrings, a pendant, two rings, and other jewellery, all of gold, which suggest the deceased was female. Overall, the Durbi Takusheyi burials are important evidence of an hierarchical state with wide trading connections (Gronenborn 2011: 70–107; Gronenborn et al. 2012).

All the tumuli discussed above appear to represent non-Islamic burial practices, but such practices seem to have been varied; not only was there inhumation in tumuli, but some small earthen tumuli west of the Inland Niger Delta contained cremations in pottery urns. Indeed, the usual burial rite in the Inland Niger Delta seems to have been inhumation in large pottery urns (McIntosh and McIntosh 1980: vol. 1, 36–7). Other non-Islamic burial practices are also recorded archaeologically from the last three millennia in the West African savanna. However, although many of these are probably pre-Islamic in date, some could be later than the introduction of Islam to the area, which was certainly in progress by the eleventh century AD. This is because the replacement of previous practices by Islamic rites is likely to have been a gradual process, rather than an abrupt change.

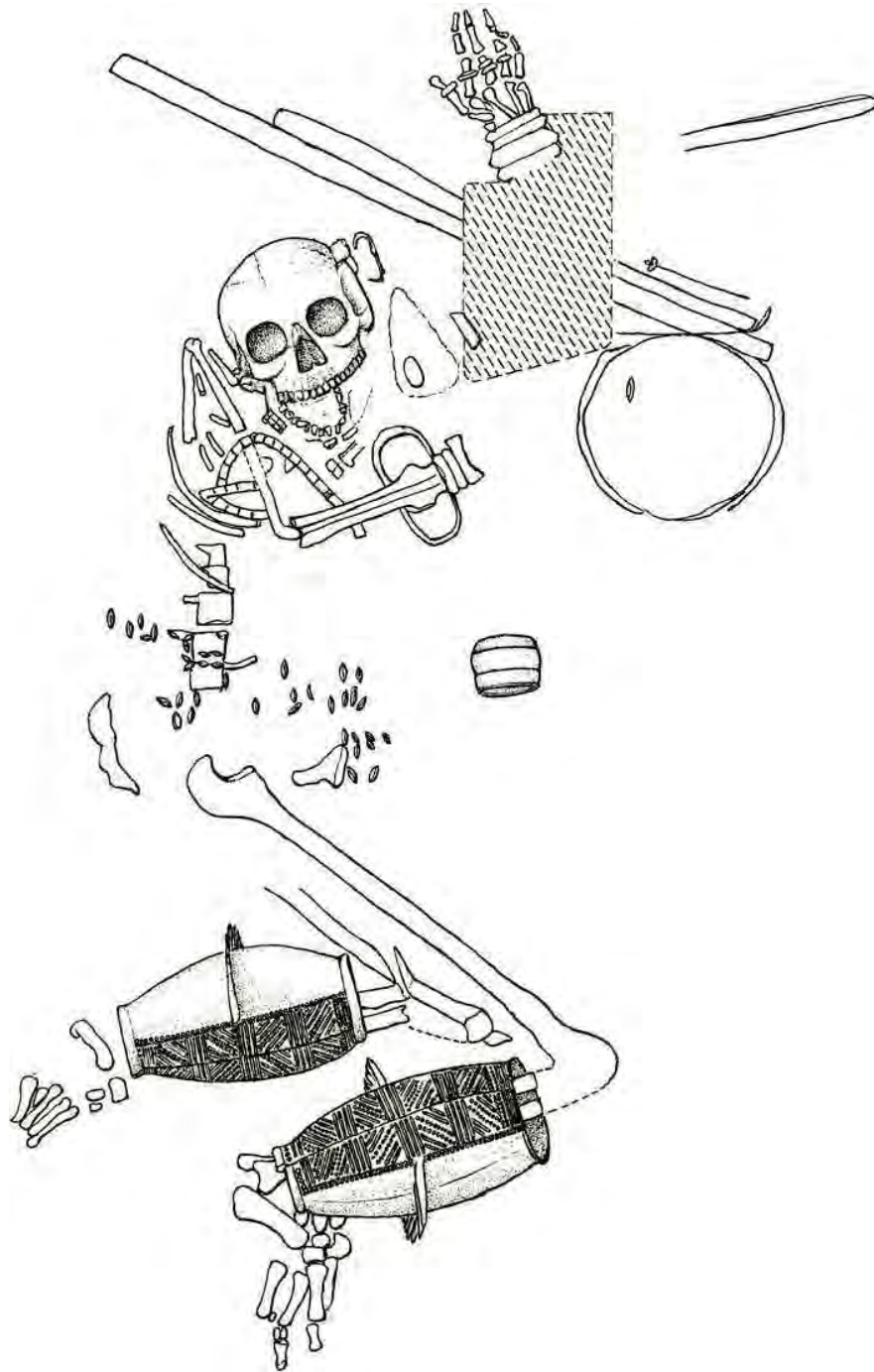


Fig. 6.8 Elite burial in Tumulus 5, Durbi Takusheyi, northern Nigeria, probably of the fourteenth century AD. The grave goods included two massive copper-alloy anklets, ingots of brass, other metal items, ivory bracelets, and cowrie and glass beads. The burial had probably been in a seated position from which it had subsequently collapsed. Drawing by Vera Kassühlke, Römisch-Germanisches Zentralmuseum (RGZM). Reproduced by permission of Detlef Gronenborn (RGZM).

Subsistence economy

Livestock husbandry and cereal cultivation seem to have been firmly established in the West African savanna by the first millennium BC (Klee and Zach 1999; MacDonald and MacDonald 1999; Neumann 1999). For example, there is evidence for domesticated cattle and small stock, as well as for both domesticated and wild *Pennisetum* sp. (bulrush [pearl] millet) at Karkarichinkat (Mali) in the second millennium BC (Smith 1992: 73–4). Also, *Pennisetum* was being grown by the beginning of the first millennium BC at Dhar Tichitt, in Mauritania, as part of a mixed farming strategy that included the herding of cattle, sheep, and goats (Munson 1976). Furthermore, from Jenné-jeno there is direct evidence for the cultivation of *Oryza glaberrima* (African rice), *Pennisetum*, and sorghum from about the third century BC onwards. These were apparently part of a diversified subsistence economy that also included substantial amounts of *Brachiaria ramosa*, a wild millet, and other wild cereals, as well as domesticated cattle, sheep or goats, and hunting and fishing. The occupation of Jenné-jeno lasted until about the fourteenth century AD; the economy remained remarkably stable throughout this period of approximately 1,600 years, although hunting became less important and the breed of cattle changed (MacDonald 1995: 313). This stability was despite climatic and demographic changes (McIntosh 1994: 172–3; 1995: 377–9). The strength of the subsistence base may be judged from the growth of this settlement, from at least 12 hectares by the beginning of the first millennium AD to a maximum of about 33 hectares towards the end of that millennium (Fig. 6.4). Indeed, the distribution of archaeological sites on the floodplain near Jenné-jeno indicates that towards the end of the first millennium the population density of the Inland Niger Delta was probably greater than at present. This was at a time when the climate of this area seems to have been wetter than usual, so that to a large extent this could explain the greater population density (McIntosh and McIntosh 1980: vol. 2, 428; R. J. McIntosh 2005: 84). Another factor of importance, however, might have been the practice of recessional cultivation (the cultivation of naturally watered areas as floodwaters recede), probably for growing rice. Recessional cultivation can constitute a form of agricultural intensification (Connah 1985), so perhaps urban growth in the Inland Niger Delta was supported by one of the relatively rare examples of African intensive agriculture. Whatever the case, the subsistence economy of the area seems to have been particularly successful. Indeed, the McIntoshs suggest that it was the agricultural surplus of the Inland Niger Delta that provided much of the food for urban centres situated in less fortunate areas such as Timbuktu, Gao, and places further afield. In such movement of foodstuffs, canoe transport on the Niger River seems to have played a major role (McIntosh and McIntosh 1980: vol. 2, 448–50).

Cultivation was already practised by about 1000 BC both in the Chad basin and in northern Burkina Faso. The settlement mound of Kursakata, in the Nigerian part of the former area, has produced grains of cultivated *Pennisetum glaucum* from the period between about 800 BC and about AD 100, and domesticated cattle and sheep or goats were present at the two settlement mounds of Gajiganna by about 1000 BC (Breunig et al. 1996; Neumann et al. 1996; Klee and Zach 1999). Significantly, the Chad basin is another area where recessionary cultivation could have given the inhabitants an advantage, and it seems likely that most cases of increasing social complexity in the West African savanna had an agricultural base that was exceptional in some way, and therefore had the potential to produce a surplus. Probably this was frequently in the form of grain, which could be stored or transported. This meant that the surplus produce of more fortunate regions could support urban centres situated on trade routes at the edge of the desert. It also meant that specialists could be supported within those urban centres. Climatic and environmental deterioration might by the twenty-first century have rendered the West African savanna less agriculturally viable than it was a thousand years ago. The McIntosh's evidence for this in the Inland Niger Delta is not the only evidence. A drop in the level of Lake Chad during the last millennium indicates that such deterioration might have been general in the West African savanna (Brunk and Gronenborn 2004), in spite of a relatively wetter period in about the seventeenth century.

The excavation of Oursi hu-beero, a house complex in northern Burkina Faso belonging to the eleventh century AD, has provided a remarkable insight into the details of a Sahelian subsistence economy (Petit et al. 2011). Pearl millet (*Pennisetum glaucum*), cowpea (*Vigna unguiculata*), and Bambara groundnut (*Vigna subterranea*) were the main cultivated plant foods, but *Sorghum bicolor* and *Hibiscus* sp. were also consumed, as were a range of wild plants and tree products. Domesticated animals included cattle, sheep, and goats, and dogs were eaten. Chicken were kept and also horses or donkeys. Fishing, hunting, and collecting molluscs contributed additional animal protein; a wide variety of fauna was eaten including monitor lizards, crocodiles, lesser pouched rats, hares, and antelopes. The use of such diverse food resources seems to have been typical of the drier savanna, as a strategy to minimise the risk of starvation, and has continued into modern times.

Technology

Iron technology emerged in West Africa no later than the middle of the first millennium BC (Pole 2010). Copper was also being smelted by a similar date (McIntosh 1994: 173–5; Woodhouse 1998). Evidence from Jenné-jeno

indicates that the occupants of the settlement mounds in the Inland Niger Delta were using iron from the time of their arrival late in the first millennium BC, in spite of the nearest iron ore being 50 kilometres away (McIntosh and McIntosh 1986: 427; McIntosh 1995: 380). In addition, the builders of the tumuli and of the megaliths discussed above seem to have been iron users. Although the condition of excavated iron is often poor, it is clear that the metal was being used for a variety of purposes by the first millennium AD, ranging from weapons and tools to bracelets and other jewellery (e.g., Fabre 2009: figure 4). There is also evidence that these were indigenous products, in the form of furnace remains, slag, and other indications that smelting and blacksmithing were widespread (e.g., Holl 2009). Indeed, iron production in the Méma region of Mali in the late first millennium and early second millennium AD was on too great a scale for local requirements only (Håland 1980). Similarly, in the Middle Senegal Valley the remains of some 60,000 iron-smelting furnaces have been counted, in only a 15-kilometre portion of the Mauritanian bank of the river, suggesting substantial iron production in the first half of the second millennium AD.

Judging by evidence from Jenné-jeno, copper was also reaching the Inland Niger Delta by the middle of the first millennium AD, and crucible and mould fragments as well as artefacts indicate that both it and bronze were being worked at Jenné-jeno by late in the same millennium, with brass introduced from the north at the end of that millennium (McIntosh 1995: 385). The early-second-millennium AD tumulus of Koi Gourrey (Killi) produced copper and bronze items, some of which appear to have been made by the lost-wax casting technique, as was also the case with two massive copper-alloy anklets (Fig. 6.8) in the probably fourteenth-century AD Tumulus 5 burial at Durbi Takusheyi (Desplagnes 1903: 165; Gronenborn et al. 2012). In addition, Bedaux and others (1978) excavated a mould for lost-wax casting from a context dated to the end of the eleventh and the beginning of the twelfth century, at the settlement mound of Doupwil in the Inland Niger Delta. Thus it seems likely that items of copper and copper alloys were manufactured locally, although the requisite metals were perhaps mined and smelted elsewhere.

Of less certain origin are the occasional items of silver and even gold jewellery recovered from some of the tumulus burials, the most remarkable being the gold disc from Rao (p. 169). Gold, although mentioned often in the historical sources, is rare in the archaeological record, as might be expected in view of its value. Nevertheless, an undated hoard of gold and silver excavated at Tegdaoust included five gold ingots as well as gold jewellery (Robert 1970), and crucibles with traces of copper and gold, from the same site, possibly belong to the eighth century AD. In addition, excavations at Jenné-jeno

produced a gold earring from a ninth century AD context (McIntosh 1995: 390); the probably fourteenth-century AD Tumulus 7 at Durbi Takusheyi contained gold jewellery (Gronenborn et al. 2012); and coin moulds dated to the ninth to tenth century AD containing traces of gold were found at Essouk-Tadmakka (Nixon et al. 2011).

There must have been miners, particularly of gold, but with the exception of Kiéthéga (1983), archaeology has little to tell us of their techniques. This is in spite of the general location of the gold deposits being known and in spite of ethnohistorical observations of traditional gold-mining methods in West Africa. There might also have been specialist builders, because mud architecture dates from the early to middle first millennium AD at Tongo Maaré Diabal and Jenné-jeno, and from a similar date at Daima in north-east Nigeria. Later in the same millennium at sites in the Inland Niger Delta, mud-bricks rather than coursed mud (*pisé*) were used for building, and occasionally fired bricks were employed (McIntosh and McIntosh 1980: vol. 1, 188–92; Connah 1981: 147–9; McIntosh 1995: 364–5). A change from coursed mud to mud-brick also occurred at Kirikongo, in Burkina Faso, about AD 700 (Dueppen 2012: 275). Furthermore, in both the Inland Niger Delta and the Chad basin potsherd pavements were made late in the first millennium AD (Connah 1981; McIntosh 1995). In areas with suitable geology, building in stone was also practised, as at Dhar Tichitt, Tegdaoust, Koumbi Saleh, and Essouk-Tadmakka. In addition, some of the larger megalithic structures and tumuli suggest the presence of people specialized in the necessary construction techniques.

Concerning other crafts, pottery making had reached an impressive technical level by the beginning of the first millennium AD. Although handmade, like most traditional African pottery, it was generally thin-walled, symmetrically shaped in many forms, and well fired. It was usually painstakingly decorated, often with impressions and sometimes, in parts of the northern savanna, with painted patterns. Pottery figurines of both animals and humans were also made, particularly in the Chad basin and the Inland Niger Delta, those of the latter area demonstrating considerable artistic skill late in the first millennium and early in the second millennium AD. In addition, from this period at Jenné-jeno there were even pottery drainpipes, further demonstrating the versatility of fired-clay technology (Connah 1981; McIntosh 1995: 368–9). This was part of a tradition of ceramic craftsmanship in the West African savanna, of which the mainly first-millennium BC terracottas from Nok in northern Nigeria are perhaps the most remarkable examples (Boullier et al. 2002–3).

The production of textiles, as indicated by the archaeological occurrence of spindle whorls, might not have developed until the end of the first

millennium AD, by which time the spinning and weaving of cotton was probably becoming established. Textile remains from Tongo Maaré Diabal have been dated to the second half of the first millennium AD, and woollen textiles from burials at Kissi in Burkina Faso have been dated mainly to the middle of that millennium, although it is uncertain whether they were produced locally or imported (Magnavita 2008). Previously, clothing was probably of leather and, with the long-standing traditions of livestock husbandry in the area, it is reasonable to suppose that the working of hides and skins had a long history. Other crafts that must also have been established for many centuries would have included wood working, bone working, basketry, and mat making. Although archaeological evidence for these activities can be limited, the 8000-year-old dugout canoe from Dufuna in north-eastern Nigeria, Africa's oldest boat, emphasizes the antiquity of both wood-working skills and water transportation in the West African savanna (Breunig 1996). Equally, the bone tools from the first-millennium BC deposits at Daima and the mat impressions sometimes used as a pottery decoration in the part of Nigeria south of Lake Chad serve as reminders of some of the other, less visible crafts (Connah 1981; Sterner 2012).

Social system

It is difficult to determine social organization from the available archaeological evidence in the West African savanna. In particular, there has been insufficient area excavation of settlement layouts and house plans. Nevertheless, the apparent density of sedentary settlement in the Inland Niger Delta, the Middle Senegal Valley, or the plains south of Lake Chad suggests the emergence of social complexity before a thousand years ago. So does the increasing size of some of these settlements: Jenné-jeno, for example, grew from 12 hectares early in the first millennium AD to 33 hectares towards the end of that millennium. With a population perhaps as large as 13,000 enclosed by a 2-kilometre city wall, beyond which perhaps as many people again lived within a distance of 1 kilometre, there must surely have been developments in order to maintain law and order and regulate trade. However, the McIntoshs question this assumption because of the lack of evidence for elites (McIntosh 1995: 396) and the few indications of social or economic differences (McIntosh and McIntosh 1993a: 632). Roderick McIntosh has argued that a heterarchy rather than a hierarchy existed, with authority arranged horizontally rather than vertically (McIntosh 2005). This is an idea that might explain other acephalous societies that nevertheless achieved social complexity, such as the Igbo of eastern Nigeria (p. 206). However, until more extensive excavation is done at Jenné-jeno and other early urban sites in the West

African savanna, it seems premature to assume that social stratification and despotic authority were absent, particularly as they had developed by the time the state of Ghana first appears in the documentary record in the eighth to ninth century AD. The gold earring found in the Jenné-jeno excavations appears to be of a similar date and suggests that there, also, resources were unequally distributed. Nevertheless, it is possible that social systems could undergo major changes over time, for example, from clan-based village societies to elite hierarchies and subsequently to egalitarianism. An attempt to identify archaeological evidence for such social transformations, in a Burkina Faso settlement at Kirikongo during the first and early second millennium AD, has been made by Dueppen (2012).

The burial evidence is less problematic: the size and sophisticated construction of some of the larger tumuli, and the wealth of grave goods sometimes present, are strongly suggestive of a social hierarchy. The owner of the Rao gold disc, for instance, was no ordinary person. In addition, the presence of human sacrifices with some other burials is indicative of the special status of the deceased. It is surely significant that the archaeological evidence, from some of the tumuli, compares so closely with al-Bakri's eleventh-century account of the burial of the kings of Ghana quoted above (p. 169). The Senegambian megaliths also suggest social differentiation: like the tumuli, they are evidence of the expenditure of considerable effort and resources for the benefit of a select group of people. Nevertheless, the usual burial rite in the Inland Niger Delta during the first millennium AD seems to have been inhumation in large pottery urns, presumably evidence of a large nonelite population that received more modest treatment in death. However, it seems that trade in gold and iron, and the presence of an agricultural surplus in more fortunate areas, were already stimulating social and political changes giving rise to the state of Ghana before the earliest Arab contact. In short, state formation was already in progress before the growth of trans-Saharan trade with Arabic North Africa, and it seems likely that during the earlier first millennium AD ranked chiefdoms, such as might have existed at Dhar Tichitt as early as the second millennium BC, were becoming stratified societies. Also in the first millennium AD, the development of urban centres was in progress, as the evidence from Jenné-jeno indicates. The culmination of such development can be seen at Tegdaoust or Koumbi Saleh, with their stone-built houses, and in the great walled city of Kano, which in 1851 had a population estimated by Heinrich Barth at between 30,000 and 60,000 (Barth 1857–8: vol. 2, 124). Indeed, during the second millennium AD, Kano and other Hausa cities became some of Africa's most developed city-states, supported by productive agriculture, varied technology, extensive trading connections, complex bureaucracies, defensive and offensive military organizations, and Islamic legitimization (Griffeth 2000).

As well as social stratification, the archaeological evidence suggests the development of functional specialization prior to Arab contact. Many craftsmen were already present in some West African savanna societies by the first millennium AD. There were also farmers, pastoralists, and fishermen; merchants and transporters; religious functionaries; and community leaders. Thus the social system in some parts of the West African savanna could have been particularly receptive of Arab and Islamic influences over the last millennium or so. The outcome was a complex mixture of the old and the new, of the indigenous and the alien.

Population pressures

The West African savanna is characterized by a dynamic interplay of opportunity and constraint, varying through time with fluctuations of rainfall. Not only have human populations had to come to terms with the specific constraints of each area, but the more productive areas have been bounded by less fortunate areas. Areas of greater productivity have also varied in both size and conditions in response to environmental variations, triggered by either climatic change or activities such as iron smelting or the grazing of domesticated animals. Such a situation would have been likely to produce population pressures, not only on the occupants of the advantaged areas by their poorer neighbours, but also within the more productive areas themselves if a period of environmentally good conditions was followed by environmental deterioration. From the McIntosh's work, it seems that this is what probably happened in the Inland Niger Delta, where the unusual hydrological conditions allowed the intensification of agriculture by means of the recessional cultivation of rice. This could have encouraged a concentration of population within this area. The work done by the McIntosh's revealed a remarkable density of settlement by the middle of the first millennium AD. In addition, the area of the Inland Niger Delta is confined, and, as the McIntosh's have shown, its variety of landforms is highly susceptible to environmental fluctuations, so that by the early second millennium AD many of its settlements had been abandoned. Such an area, richly endowed with resources and yet subject to periodic stress, could well have been the location of social changes. It is thought that the Middle Niger supported a population with a relatively high density, and it has been estimated that during the first millennium AD the population of the Sahel states (Mauritania, Mali, Niger, and Chad) doubled from 1 million to 2 million – by 1975 it was about 15 million (McEvedy and Jones 1978: 238–40). Given recurrent droughts and environmental degradation, social and economic instability must have been a constant threat in this region. Intergroup violence was probably one consequence, of which the burning of

the Oursi hu-beero house complex and the death of three of its occupants in the eleventh century AD provides some archaeological evidence (Petit et al. 2011: 210–14). Population pressure was surely one of the circumstances that stimulated social changes leading to urbanization and state formation.

Ideology

Historical sources indicate that Islam had an important influence on the course of West African urbanization and state formation. The Islamic world of the early second millennium AD was a world of independent states, in which substantial numbers of people lived in towns and cities that were often the centre of mercantile activities. It was also a proselytizing world, seeking, with fluctuating enthusiasm, to convert the infidel not only to its religious beliefs but also to its way of life. Archaeology has revealed the remains of early mosques in a number of places, at Koumbi Saleh, Tegdaoust, and elsewhere (Mauny 1961: 472–6; Robert 1970), and indeed some mosques still in use, such as that at Jenné, are reputed to be of great age. However, archaeology has also confirmed historical evidence that the inhabitants of the earliest cities and states of the West African savanna were not Muslims. The tumuli, in particular, indicate non-Islamic practices, as also do the urn burials of the Inland Niger Delta and the making of clay figurines in that and other regions. Some of this evidence might represent a survival of traditional practices after Islam had been introduced to the West African savanna, and historical sources indicate that this did happen. Nevertheless, urban development at Jenné-jeno by early in the first millennium shows that the origins of urbanization and state formation in the West African savanna were indeed pre-Islamic. The people involved with these developments must have been animists, and the variety of non-Islamic burial practices in the archaeological record of the West African savanna would suggest that there was considerable diversity of belief among different human groups. It is not known what these beliefs were, but the evidence of the tumuli, the megaliths, and human sacrifice suggests that funerary cults were significant. In such cults, ancestors could have had an important role in which the clay figurines were relevant, so that the monumental character of some of the associated structures might indicate that ideology provided reinforcement for elite authority.

External trade

Using historical sources, both Bovill (1968: 236) and Levtzion (1973: 10) saw long-distance trade as a vital stimulus to developments in the West African savanna. Certainly, archaeological evidence of the trans-Saharan trade of Bovill and Levtzion has been found often enough. For example, Koumbi Saleh

produced stone plaques with Arabic inscriptions and Islamic decorations, not to mention stone houses said to show Maghrebian influence (Thomassey and Mauny 1951; 1956). Thus, also, Tegdaoust yielded imported pottery, oil lamps, glass vessels, glass weights, and ingots of both copper and gold (Robert 1970). Perhaps the most impressive of the archaeological evidence for the trans-Saharan trade, however, is amongst the group of twelfth- and thirteenth-century gravestones found at Sané, near Gao on the Niger in Mali. Some of these are marble gravestones with inscriptions in Kufic, an early angular form of the Arabic alphabet. These inscribed stones have been closely dated to AD 1100–1110 and are thought to have been made in Spain and carried by camel across the Sahara (Flight 1975: 82). There is even archaeological evidence of the difficulties that could assail such trans-Saharan camel transport, in the form of the abandoned loads of a caravan buried in a sand dune in the lonely Majâbat Al-Koubrâ, halfway across the desert. Dated to the twelfth century AD, these loads consisted of large numbers of brass rods and of cowrie shells of the species *Monetaria moneta* (Monod 1969). The presence of such shells, more than 9,000 kilometres from their source in the Maldiv Islands, south-west of India, is eloquent testimony to the very extensive trading networks of which the trans-Saharan trade formed a part (Hogendorn and Johnson 1986: 18).

There is, indeed, a considerable amount of archaeological evidence for the trans-Saharan trade. For instance, countless sites in the West African savanna contain beads of glass or semi-precious stones; many of the earlier of these must have originated from that trade. The source and date of manufacture of such beads can be difficult to determine, but some might indicate that the trans-Saharan trade is older than has usually been thought. It is becoming apparent that relay trading networks in the Sahara, rather than trade crossing the whole desert, had already developed by Roman times (Wilson 2012). Of six Jenné-jeno glass beads selected for chemical analysis, from contexts dating from the last two centuries BC to AD 1400, the earliest is likely to have been made in India or East or South-East Asia, while one of the later ones might have come from India and another have been of Roman origin, from Egypt or Italy. Only two of the beads appear to be from an Islamic source (McIntosh 1995: 252–6). Glass beads of Asian origin from burials at Kissi, in Burkina Faso, also indicate the existence of a trans-Saharan trade during the first millennium AD before the arrival of Arab merchants (Magnavita 2003). Furthermore, analysis of copper-alloy objects from the same site has shown that most consisted of metal from North Africa and beyond (Fenn et al. 2009). Other evidence for the Saharan trade consists of the location of some of the West African cities and towns. Pushed well forward of the most viable agricultural lands of the savanna or even into the desert proper, such places as Timbuktu, Tegdaoust, or Essouk-Tadmakka were clearly located at strategic

points on the trade routes, rather than in hinterlands that could support them. Also, many of the savanna urban centres appear to have grown up at environmental interfaces, between transportation systems. Thus at Timbuktu goods were transferred from camel to canoe, and at Kano from camel to donkey. A comparable situation will be seen in [Chapter 7](#): trading centres growing up at the junction of the savanna and forest, where the tsetse fly made it necessary to transfer goods from donkey to human head.

However, archaeological evidence does not give the detailed picture of Saharan trade reconstructed by historians ([Fig. 6.9](#)). Where in the archaeological evidence is any indication of the millions of tons of salt that must have travelled south from the desert to the savanna ([Lovejoy 1986](#))? Similarly, where is the evidence of the cloth that was carried south from North Africa, or of the thousands of slaves who were taken north ([Meillassoux 1991: 44–64](#)), or of the ivory, ostrich feathers, fine leather, and pepper? For that matter, who would realize, from the archaeological evidence, just how important the gold trade was? Clearly, some of the durable commodities, which were traded to the south, had a greater chance of surviving in archaeological contexts than the generally organic consumables, which dominated the trade to the north. Thus there will be a tendency for the West African archaeological evidence to be biased in favour of imports. This makes the discovery at Gao of a tenth- to eleventh-century AD hoard of at least fifty-three hippopotamus tusks, apparently a hidden consignment of export ivory, particularly important ([Insoll 1995; 1996a: 38, 40, 98](#)). Also the discovery at Essouk-Tadmakka of coin moulds with traces of gold, dated to the ninth to tenth century AD, has provided evidence of the early development of the gold trade ([Nixon et al. 2011](#)). Furthermore, artistic representations of black Africans in the ancient Mediterranean world is an indication that the Saharan slave trade was already active in the first millennium BC ([Fentress 2011](#)). Similarly, a review of the archaeological evidence south of the Sahara by [MacDonald \(2011\)](#) has traced the origins of the Saharan trade to the first millennium BC and earlier.

Of course, questions about the traded commodities lead to others. If West African agriculture is at least 3,000 years old, as the evidence appears to indicate, then why should we believe that the salt trade developed only towards the end of the first millennium AD with the advent of the Arabs and their camel caravans? According to [Nenquin \(1961\)](#), an adult on a mixed diet needs 12 to 15 grams of salt per day. In the West African savanna, salt could be brought from the coast where it has long been extracted from seawater, transported from the Sahara where it is quarried from rock-salt deposits, or obtained by filtering plant ashes, which is possible only in certain areas and is not very efficient ([Alexander 1993b](#)). In practice, this leaves extensive areas where the local supply is deficient but where diet and climate make salt a necessity.

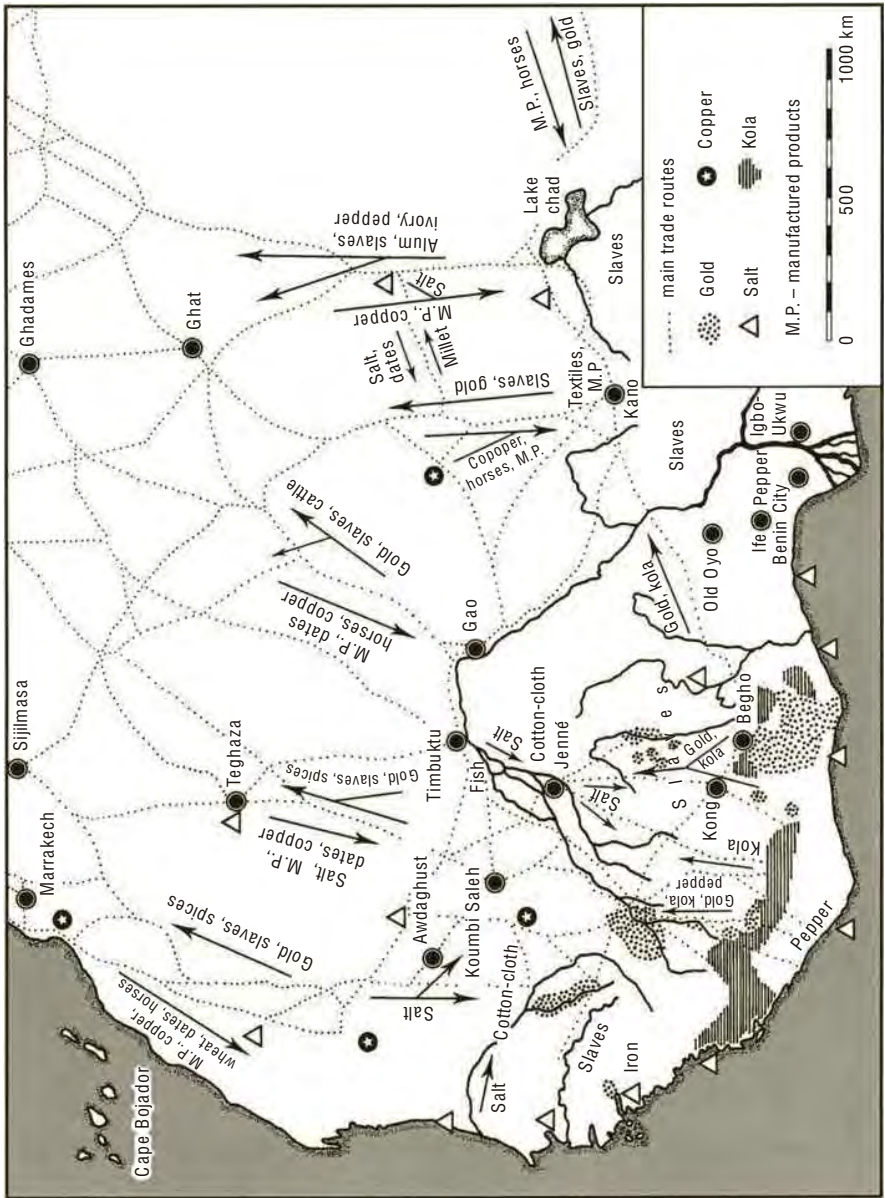


Fig. 6.9 Precolonial trade routes and commodities in West Africa. After Mauny 1961: fig. 55.

Consequently, it is probable that trade networks within West Africa are likely to be at least as old as the beginnings of food production in the region and that trading contacts with the desert are therefore nearer to 3,000 than to 1,000 years old. In addition, no one has suggested that gold mining in West Africa commenced because of stimulus from across the desert. On the contrary, historical sources tell us that West Africans were so secretive about the location of the mines that outsiders had little idea where the gold came from. Furthermore, there is evidence of gold at Jenné-jeno by AD 800. Thus there seem to be several reasons for supporting the idea that a regional network of trade routes grew up in West Africa before the advent of the Arab trans-Saharan trade. The McIntosh (1980: vol. 2, 444–6) pointed out that because Jenné-jeno was using iron from the time of its earliest occupation, and because there was no iron ore in the vicinity, then supplies of raw materials or of finished iron must have been brought from more than 50 kilometres away. Also, situated at the interface of the dry savanna and the Sahel, on a fertile alluvial plain, and at the highest point on the River Niger for reliable seasonal river transport, Jenné-jeno was well placed to play an important role in a developing trade network.

Paintings and engravings on rocks in the Sahara of horse-drawn chariots and ox-drawn carts suggest that such a network could have had early connections with the desert (Mauny 1978; Law 1980b). These are distributed along two main axes, both of which stretch from North Africa to the Niger, axes which have been called ‘chariot tracks’. It has been assumed that these rock drawings date from the first millennium BC, more likely from its second half. Most scholars now doubt that these are representations of vehicles used in commerce, however, and Camps (1982) rejected the idea of ‘routes’, pointing out that the distribution of this rock art merely reflects the distribution of rock outcrops in the Sahara. Nevertheless, this art is important in indicating that horse and ox traction and wheeled vehicles were known in the desert before the advent of the camel during the first few centuries AD (p. 151). Indeed, Blench has argued that the small West African ponies mentioned in historical sources ‘were produced by the dwarfing of horses brought across the Sahara in the last three thousand years’ (Blench 1993: 103). Even Bovill could admit, with characteristic wisdom: ‘There is certainly no reason to suppose that caravan traffic in the Sahara only became possible with the arrival of the camel’ (Bovill 1968: 17). Timothy Garrard has indicated that such traffic could have been at least pre-Arab in origin. He has suggested the existence of a Berber gold trade in the early first millennium AD, between the savanna and the Roman world, because the Carthage mint began issuing gold coins at the end of the third century, although it had no local gold source (Garrard 1982). In addition, the McIntosh (1980: vol. 2, 445) have commented on the presence of copper at Jenné-jeno from the middle of the first millennium AD; the

three closest known sources are all in the Sahara. The McIntosh could well have been correct when they argued that ‘the rapid establishment and expansion of Arab trade in the Western Sudan was possible because it keyed into an already-extant system of indigenous sub-Saharan trade networks’ (McIntosh and McIntosh 1980: vol. 2, 450).

Conclusion

The emergence of urbanism and political centralization in the West African savanna was formerly attributed to contact with the Mediterranean world, resulting from long-distance trade. Suspiciously, the origins of that trade were usually dated to the period of the earliest historical sources that touched on the subject. Archaeology tended to play a confirmatory role in the stock historical interpretation. It was a case of so much historical information being available that archaeologists failed to ask the sort of questions that they might have asked otherwise. As a result, the quality of the archaeological data available to shed light on the origins of cities and states in the West African savanna was poor. This situation has now changed, and work at Jenné-jeno and related sites in the Inland Niger Delta, as well as in other parts of the West African savanna, has produced a very different picture. A review of the evidence makes the long-accepted external-stimulus explanation untenable. It would appear that the West African savanna by the beginning of the first millennium AD already had a sound agricultural base, with the potential for intensification of production in some more fortunate areas, and already had a varied iron-based technology. Developing social complexity is already evident at Dhar Tichitt as early as the second millennium BC, and it seems quite probable that during the first millennium AD, and prior to Arab contact, stratified societies were emerging in the West African savanna, based on resource control stimulated in part by localized population pressures. At the same time those pressures, coupled with increasing functional specialization and expanding local trade, encouraged a growth in size both of individual settlements and of aggregations of settlements, leading to some of West Africa’s earliest examples of urbanism. Such developments seem to have taken place before the advent of Islam but, nevertheless, with the ideological support of a variety of animistic religions. Finally, it seems most likely that an extensive trading network existed within West Africa before the Arab trade across the Sahara began and that this network had already developed contacts across the desert. The cities and towns of the savanna were indeed to become ‘ports’ at the edge of the ‘sea of sand’, as Levtzion (1973: 10) said (p. 155), but they were ports with a vast trading hinterland that already existed. After all, what ship would ever visit a port unless there was a chance of delivering or collecting a cargo?

Chapter 7

Achieving power: the West African forest and its fringes

In the second half of the fifteenth-century AD European sailors first set eyes on the southerly coast of West Africa. What they saw was hardly encouraging: from a distance, a vague grey line pencilled in between an immensity of sea and sky; from close-in, either a dangerous, surf-pounded, sandy beach or an uninviting network of mangrove swamp, creek, and river mouth. Whatever the character of the shoreline, however, behind it there was nearly always an impenetrable tangle of trees and other vegetation. Experience soon taught such visitors that this was a coast to be reckoned with: ships' crews died of fever, and shipworms (*Teredo* spp.) ate the bottoms out of their ships. Yet it was neither altruism nor curiosity that tempted most Europeans to such a region; it was profit. The very names they gave to different parts of this coast indicate their motives: 'The Grain [pepper] Coast', 'The Ivory Coast', 'The Gold Coast', 'The Slave Coast' (Bosman 1967: frontispiece map). Europeans quickly discovered that behind the coast lay a forested and savanna hinterland rich in resources, where the inhabitants were willing to trade on a considerable scale. Not only that, but those inhabitants lived in highly organized communities, some of which took on a size and density which left the visitors in no doubt about what they were dealing with. Within some parts of the West African forest and its fringes there were, indeed, hierarchical states, towns, and cities. Because of their conspicuousness, it was these large settlements that particularly attracted European attention. Thus, writing in AD 1507–8, the Portuguese Duarte Pacheco Pereira described Ijebu-Ode (now in Nigeria) as 'a very large city' (Bascom 1959: 38). In a similar vein, the Englishman Towerson, writing in 1557, could claim, perhaps with some exaggeration, that a town in what is now Ghana was 'by the estimation of our men, as big in circuit as London' (Blake 1942: vol. 2, 406).

These quotations are selected from early in the history of European West African contact, because state development and urbanization in the West African forest and its margins have sometimes been written about as if they were developments resulting from that contact rather than pre-dating it. Although there is no doubt that European seaborne trade did play an important part in the later development of these states and their towns and cities, historical sources suggest that some were in existence before that trade started. Oral traditions give a similar impression, and, since the middle of the twentieth century, archaeological evidence has pointed in the same direction. It seems

likely that there was increasing social complexity in some parts of the West African forest and its fringes from late in the first millennium AD onwards. The question is why should such developments take place in and around the West African rainforest, environments that to many outsiders have seemed to constrain rather than to encourage human endeavour?

Geographical location and environmental factors

Compared with the West African savanna (Chapter 6), the tropical rainforest of West Africa occupies a relatively small area. An extension of the equatorial rainforest, it stretches from Cameroon to Sierra Leone but is broken between the western frontier of Nigeria and eastern Ghana by a gap where forest–savanna mosaic and relatively moist woodlands and savanna reach the ocean. This is known as ‘The Dahomey Gap’ and its alternating absence and presence in the past indicates the role of climatic change in determining the extent of the rainforest (Salzmann and Hoelzmann 2005). At present, the belt of rainforest is never wider than 400 kilometres, and in many places it is narrower. To the south it is bounded by coastal mangrove swamp or by the Atlantic Ocean. To the north it merges into forest–savanna mosaic, often called ‘derived savanna’ because it has been thought to result from agricultural exploitation, over many centuries, of what was originally tropical rainforest. This would suggest high population densities, although (as with the Dahomey Gap) climatic change is also likely to have been an important factor. Whatever the cause, these northern fringes of the forest form an ecotone that has been particularly important in the history of the human race in West Africa. It is therefore impractical to consider the West African rainforest without giving attention to the adjacent savanna into which it merges.

As recently as the middle of the twentieth century the West African forest, where undisturbed, consisted of dense tropical rainforest. A few large trees grew to a height of about 42 metres and many others to a height of about 27 metres, but they protruded above the main leaf canopy that was formed at about 10 metres by most of the trees. Smaller trees and bushes densely occupied the zone below. It is possible that in its natural state the forest often lacked this dense tangle of lower growth, and the forest floor may have been relatively easy to traverse (Richards 1952: fig. 6, pp. 29–31). However, much of the forest has now been taken over by secondary growth, often of no great height but virtually impenetrable unless one chops a path through with a machete. To some extent, this results from modern timber exploitation, but even at the beginning of the twentieth century Thompson (1910–11: 131) recorded that most of the forest consisted of secondary growth. It seems probable that this situation resulted from the long practice of rotational

bush-fallow agriculture. In the area around Benin City, for instance, it was shown during the 1960s that most of the apparently 'well-grown forest of considerable age' had probably 'been farmed at one time or another during the past few hundred years' (Allison 1962: 243, 244). The secondary growth that has resulted is so dense that Boisragon and Locke, fleeing for their lives after the so-called Benin Massacre in 1897, found it very difficult to travel through the forest, which was 'so thick that neither man nor beast can press through it' (Boisragon 1897: 94). An 1817 account of part of the Asante forest, in what is now Ghana, by Bowdich (1966: 20-1), indicated the problems of travel even when fear was not forcing a cross-country route. Descriptions such as these make it difficult to understand how the West African rainforest could have been the setting for the cultural developments that undoubtedly took place there.

In reality, the forest is much more complex and varied than descriptions by culture-shocked Europeans, writing to impress other Europeans, have often made it appear. In the area around Benin City, for example, it seems that vegetation on the upper interfluves might originally have been less dense than that of the lower valley slopes, and it has been shown that farming has tended to concentrate on those more easily cleared areas. Darling suggested that the forest environment around Benin varied in part because of the ever-changing mosaic of plant succession following agricultural clearance and fallowing, but also in part because of differences in soil characteristics. In addition, if we consider local perceptions of the environment, we find not the European notion of continuous forest broken only by clearings for settlements but a three-part division of the 'forest' itself into farmlands, fallow areas, and 'wild' forest. It is also possible that forest density has varied through time. Both climatic change and human activity could have resulted in more open conditions in the past. This is suggested by some historical accounts and by the extensive earthworks in the Benin City region, discussed later in this chapter. These ditches and banks are virtually invisible in dense rainforest or regrowth and must have been constructed when there was far less vegetation cover than in recent times; otherwise, they would have been of little use as boundaries (von Hellermann 2010).

In one respect the forest has an advantage over the savanna to its north: it has more water. Rainfall is higher, the wet season longer, humidity greater, and evapotranspiration lower. As a result, the forest has numerous rivers and streams, many of which flow all the year round. Also as a result, the rate and ease of vegetal growth is phenomenal; even fences take root and grow into thriving hedges or rows of trees. It is apparent that many forest soils are moderately fertile, if this is measured in terms of productivity. This is providing that farming practices minimize erosion and alternate brief

cropping periods with long periods of fallow, during which the 'bush' is allowed to invade the fields.

Many resources would probably have been available in the West African forest and its fringes 2,000 to 3,000 years ago. The most significant would have been plant foods, including several species of yam, the oil palm, kola, coffee, okra, fluted gourd, and *akee* (a tree cultivated for its fruit). At the western end of the forest belt there might also have been African rice and Melegueta pepper, the so-called Grains of Paradise (Harris 1976: 329–33). Introduced plants of South-East Asian and tropical American origin (such as certain yams, plantain, banana, sugarcane, citrus fruits, cassava, sweet potato, maize, papaw, and chilli pepper) have become so important now in this region that it is easy to forget that the West African forest and its edges were already well endowed with plant foods before these others arrived. Particularly important amongst the indigenous plants would have been the various West African yams and the oil palm, the former providing carbohydrates and the latter supplementing these with both fat and vitamin A (Harris 1976: 351). It should be noticed, however, that both yams and oil palms seem originally to have belonged in the forest–savanna ecotone and must have been introduced to the forest proper by people planting them on cleared land. Thus Coursey's West African 'yam zone' (Fig. 6.1) includes extensive areas of the southern savanna as well as the more northerly parts of the forest (Coursey 1980: Fig. 1). In contrast to plant foods, the forest was not so well provided with animal foods as was the savanna. Tsetse flies precluded the keeping of domesticated livestock in the forest, with the exception of small numbers of trypanosomiasis-resistant dwarf goats and cattle (Blench 1993). Furthermore, the forest had fewer wild animals that could be hunted than did the savanna, although a wide selection of those that were present have probably been eaten in the past, including elephants, baboons, monkeys, bats, large rats, the giant land snail (*Achatina* spp.), and anything else that could be caught. In addition, fish from the sea, coastal lagoons, and rivers have almost certainly been an important source of animal protein for a long time. The forest also possessed numerous other resources, of which perhaps the most important were a great many types of wood, suitable for everything from house building to canoe making to carving to firewood. Various sorts of wood could also be burnt to produce charcoal, potash, salt, and other things. In addition, the forest could supply numerous medicinal substances, beeswax, gum, bark, rope, and other commodities. There was also ivory; inorganic raw materials included gold, iron ore, copper, lead, rocks suitable for making grindstones, good building earths, and potting clays. Last, a population density that in places was probably higher than in the more northerly savanna could be exploited as a source of slaves.

The West African forest zone and its edges suffered from constraints as well as benefiting from substantial resources. The most serious constraints were diseases that included trypanosomiasis that afflicted domestic animals and, as sleeping sickness, humans as well. The latter was only part of a heavy burden of human diseases; malaria, in particular, has been so serious a problem for so long a time that some populations in the region have developed a greater than normal incidence of the sickle-cell gene, a blood anomaly that provides a measure of protection (Livingstone 1967). Other serious diseases included yellow fever, dengue fever, filariasis, yaws, and a wide selection of parasitic infections, particularly of the intestinal tract. Disease levels in these areas might have been higher than those of the more northerly, drier savanna. Another constraint within the forest and forest-savanna mosaic was the availability of water during the dry season. In spite of a greater rainfall than most of the savanna, a long dry season together with generally permeable soils and high temperatures on cleared surfaces meant that women and children frequently had to carry water long distances from rivers and streams. Various strategies were used to alleviate this problem, including wells, underground cisterns, and even artificial ponds. The extent to which dry-season water supply could be a problem, however, particularly for large groups of people on the move, is illustrated by the experience of the British expedition against Benin City in 1897, for which water was a major worry (Home 1982). That same expedition also showed how difficult communication within the forest could be, with movement restricted to narrow paths and head loading the only means of shifting burdens. Communication problems have, indeed, been another traditional constraint, particularly during the wet season when paths are frequently reduced to rivers of mud. Nevertheless, the people who lived in and around the forest adapted well to such difficulties. Thus canoe transport on rivers and coastal lagoons was extremely important, and the very impenetrability of parts of the forest could be used as a defence by leaving a ring of uncleared land around settlements, as was recorded in the nineteenth century for the 'war-towns' of Sierra Leone (Siddle 1968).

To people not accustomed to living in the West African forest and forest fringes, the constraints might seem sufficient discouragement from developing the undoubted resources. However, states, cities, and other aspects of cultural complexity did develop in some parts of those zones, and these developments probably commenced without external stimulus, because both distance and environment attenuated influences from the northern savanna and Sahel. Nevertheless, by the end of the first millennium AD the forest and forest-savanna ecotone were probably linked with the regions to their north in a regional trading network (Insoll 1996b: 668; Casey 2010). Only the

appearance of European traders on the coast of West Africa reversed this economic orientation and turned what had been a relatively remote hinterland into a major contact zone of long-distance trade.

Sources of information

Historical evidence

Most of what is known about precolonial urbanization and state formation in the West African forest and its fringes comes from historical sources. Numerous contemporary accounts by European visitors from the late fifteenth to the late nineteenth century represent the outsider's view. These visitors were of different national backgrounds: in particular, Portuguese, English, Dutch, French, Danish, and German; and of a variety of professions, including sailors, traders, explorers, and missionaries. To their number must be added others who merely stayed at home and compiled books and maps from information supplied by those who had actually visited the Guinea Coast. Some of the principal accounts by outsiders are those by Adams, Barbot, de Barros, Bosman, Bowdich, Burton, Dapper, de Marees, Landolphe, and Pacheco Pereira. Such sources throw light on some of the societies of the West African forest and its fringes during the 400 years prior to colonial takeover. A.F.C. Ryder, for instance, was able to use them as the main basis for a study of European relationships with the state of Benin (Ryder 1969). They are limited, however, not only by their sometimes imperfect understanding of what was observed but also by their short time range. Whereas external sources for the West African savanna reach back for a little over a thousand years, those for the forest zone and related areas cover only half that time. Fortunately, however, they are complemented by the insider's view, represented by the oral traditions of West African societies themselves. European scholars collected many of these in recent times, but the people to whom they refer also recorded some of them. Perhaps the most notable of these are Samuel Johnson's *History of the Yorubas*, originally published in 1921 (Johnson 1921), and Jacob Egharevba's *Short History of Benin*, first published in 1934 (Egharevba 1968). Such sources do throw a little light on the centuries before Europeans appeared on the Guinea Coast; they take us back perhaps to the beginning of the second millennium AD. Unfortunately, however, their information on the earlier periods is limited and of doubtful reliability. Their chronologies are particularly uncertain, as Bradbury demonstrated in the case of Benin City (Bradbury 1959). Overall, therefore, the written and oral historical sources have comparatively little to tell us about the origins of cities and states in the forest and adjacent savanna, except that such developments either took place

during or had already taken place by the first half of the second millennium AD. From such sources, it has sometimes been implied that these developments were later than those of the savanna because it took longer for long-distance trade and postulated migrations to reach so far into the hinterland. In other words, as in the savanna, external stimulus has been advanced as an explanation, an explanation now thought to be unacceptable.

Archaeological evidence

Archaeological research, concerning recent millennia, commenced later in the West African rainforest and its margins than further north. Nevertheless, there has been a similar tendency to pursue research programmes aimed at providing more information on historically known sites. Archaeological field prospection and survey is so difficult in the forest itself that sites are not easily found; it is easier to excavate sites that are known from documentary sources or oral traditions. Patrick Darling's work on the linear earthworks of Benin and Ishan (Darling 1984; 1988; 1998) is one of the few cases where systematic search has revealed previously unknown sites. Also, the artwork associated with some of the historically known sites of southern Nigeria has often concentrated archaeological attention on those sites, such as at Ife (Willett 1967). As a result, archaeological field research and excavation has been limited to relatively few sites, particularly in Ghana and Nigeria, although there has also been activity in Sierra Leone and the Republic of Benin. More recently, increasing attention has been given to urban and state developments during the second half of the second millennium AD. The archaeological evidence is more visible than that for earlier periods, and associated documentary and oral sources enhance its interpretation, suggesting the ways in which earlier developments might have taken place.

Some of the archaeological evidence relevant to the origins of urbanization and state formation in the forest and its fringes comes from investigations into the Akan states, in what is now Ghana. These have been described as city-states, which collectively comprised a city-state culture (Kea 2000). James Anquandah (1982: 85–112) described the Akan as 'a golden civilization'; these states seem to have controlled part of the gold trade from the forest north to the Inland Niger Delta. The Akan states already existed by the beginning of the eighteenth century AD when they were mentioned by European visitors, and a considerable amount is known about the last major Akan state, that of Asante, in the eighteenth and nineteenth centuries (McLeod 1981). The earlier of these states were situated on the fringes of the forest, and archaeological investigations at the site of Begho, in this region, have revealed the remains of a large market town made up of four different 'quarters', which were 1 to 2 kilometres from one another (Posnansky 1987; 2010). These constituted

a dispersed pattern of residence, probably subject to episodic mobility (Fletcher 1998). Each of these quarters consists of a group of mounds, about 1.5 metres high and 30 metres across, which are often L-shaped and which are in most cases the remains of mud-walled houses. Some 1,500 of these mounds have been counted, enabling Anquandah (1993: 648) to estimate that the population of Begho peaked at 10,000 in the seventeenth century AD, when the densest area of settlement covered about 3 square kilometres. At first, oral tradition and radiocarbon dates indicated that the town was occupied between about 1400 and 1725, being most prosperous towards the beginning of the seventeenth century, but radiocarbon dates from subsequent excavations indicated that settlement probably began as early as the eleventh or twelfth century (Posnansky and McIntosh 1976: 166, 189). Excavation of some of the house mounds has yielded evidence of a population engaged in metallurgical, textile, and ceramic industries, supported by an agricultural subsistence economy that included domestic cattle, sheep, goats, and pigs and by a substantial long-distance trade (Anquandah 1993: 649).

At Bono Manso (Fig. 7.1), another town site in the same region, occupation appears to have commenced about the thirteenth century and to have continued until about the middle of the eighteenth century (Effah-Gyamfi 1985). This seems to have been a more nucleated settlement than Begho and perhaps more homogeneous in its ethnic composition, for there was a separate settlement of aliens (probably Muslim merchants) about 4 kilometres away at Kramokrom. Like Begho, numerous small mounds, most representing the remains of houses from which population estimates could be made, characterized Bono Manso. Archaeological investigations, including excavation, showed that Phase I of the settlement had occupied a more extensive area than Phases II and III but that its population, estimated at about 4,000, had actually been lower than the approximately 10,000 and 8,000 estimated, respectively, for the two later phases. A dispersed pattern of residence had apparently changed to a more compact one, perhaps reflecting sociopolitical changes (Effah-Gyamfi 1985). This contraction to a more densely occupied form of settlement is of considerable theoretical interest because, according to Fletcher's 'interaction-communication model', 'Bono Manso contracted to precisely the maximum areal extent at which it could have been nonliterate and permanently sedentary' (Fletcher 1998: 125).

Thus Begho and Bono Manso do throw some light on the origins of urbanization, and perhaps of state formation, on the fringes of the Ghanaian forest during the early second millennium AD. Furthermore, excavations at Adansomanso and Asantemanso (Fig. 7.2) provided evidence of settlement growth within the forest itself from the late first millennium AD onwards, suggesting even earlier developments (Vivian 1996; Shinnie 2005). Also, the second phase of a site some 150 kilometres further north at New Buiepe represents an

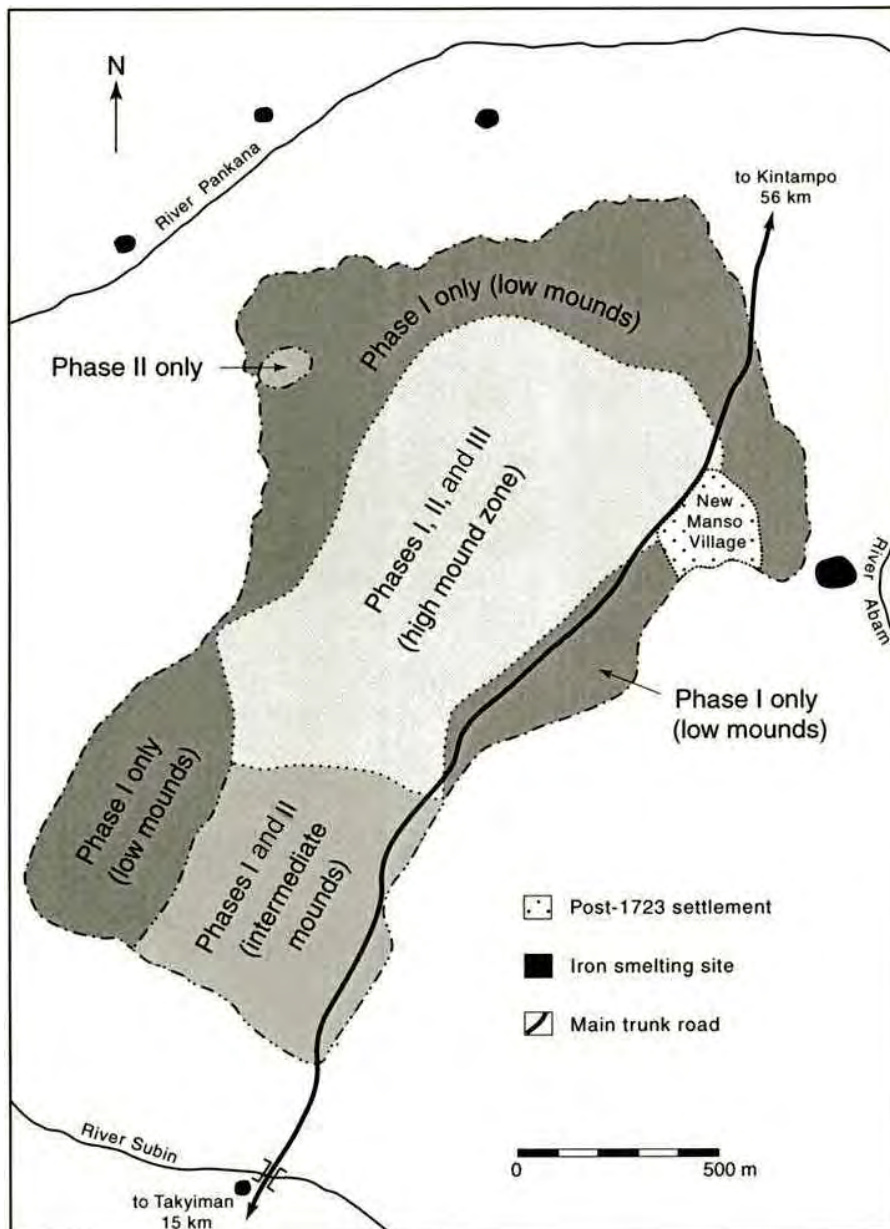


Fig. 7.1 Plan of the site of Bono Manso, in Ghana, indicating a change from a dispersed pattern of residence to a more compact one. After Effah-Gyamfi 1979: fig. 2.

iron-using community late in the first millennium AD. Consisting of three mounds with a total diameter of less than 200 metres, they seem to have been part of a larger complex (York 1973). It might also be significant that the area

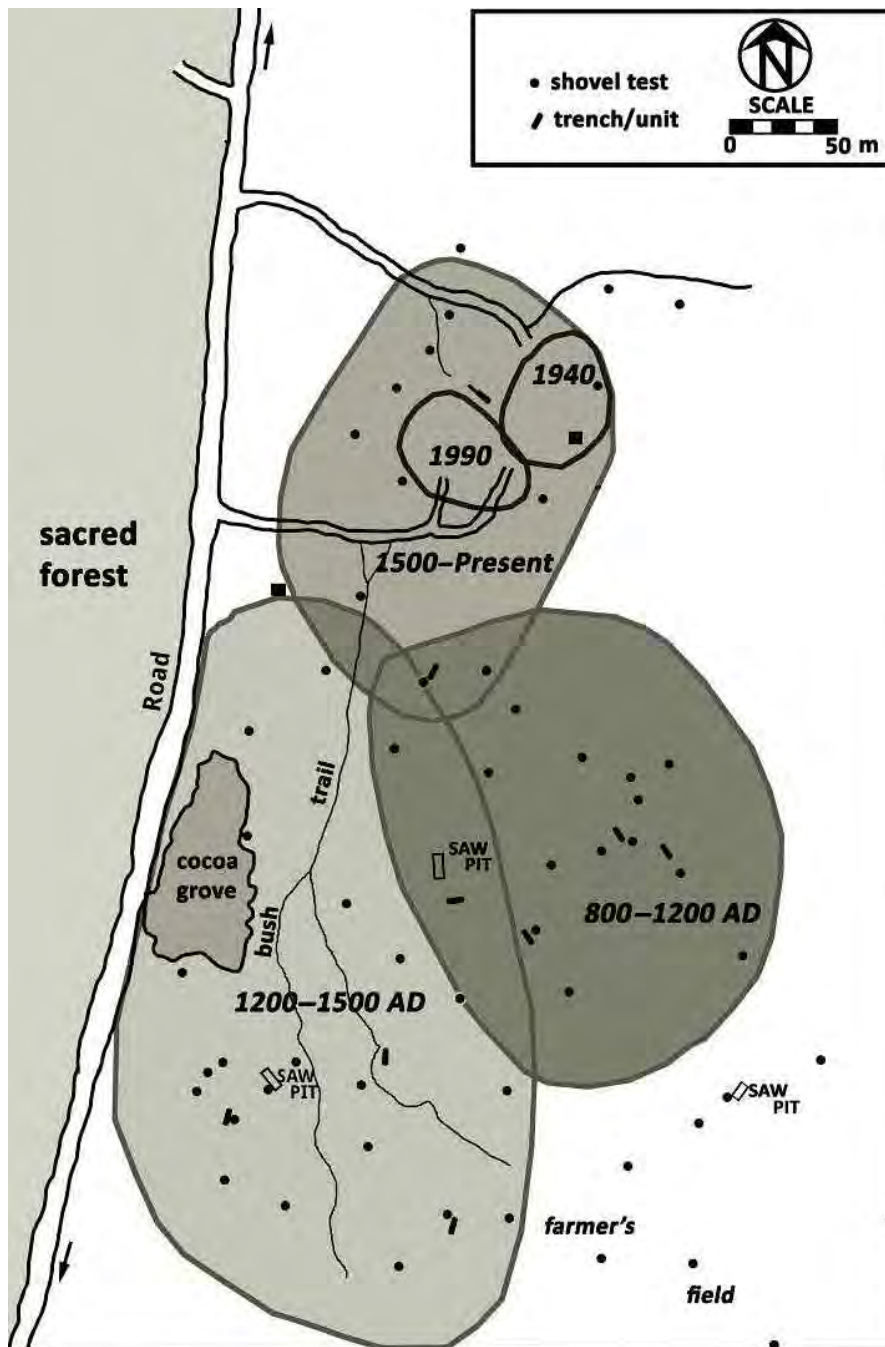


Fig. 7.2 Plan of the site of Asantemanso, in Ghana, showing areas of occupation during different periods. After Shinnie 2005: fig. 1. (Redrawn by Andrew Stawowczyk Long.)

of the early Akan states on the forest fringes (the centre of Akan power shifted into the forest proper only after European contact) is the same area that provided most of the evidence for the early food-producing Kintampo Tradition of the late third to late second millennium BC (Watson 2010). In addition, it is an area rich in iron ore and has produced a second-century AD radiocarbon date for iron smelting at Hani, near Begho (Posnansky and McIntosh 1976) and a fourth-century radiocarbon date for an iron-smelting site adjacent to Bono Manso (Effah-Gyamfi 1985: 204). The problem is linking such earlier evidence to the growth of urban communities in the second millennium AD. This is in spite of excavations by Shinnie and Kense (1989) at the town site of Daboya, on the White Volta River further north in the savanna. Occupied during the last 4,000 years or so, its earliest evidence for iron was in about the middle of the first millennium BC. A source of salt, Daboya probably became a link in an extensive trading network. However, much later evidence from the Republic of Benin, dating from the seventeenth to nineteenth centuries AD, shows how urban and state development could occur in this region. Albeit spurred by the European-sponsored Atlantic trade, the growth of urban centres, particularly at Abomey (Fig. 7.3) and Cana, and the emergence of the states of Dahomey, Allada, and Hueda provide a model for sociopolitical changes that might also have occurred earlier than archaeological evidence presently indicates (Monroe 2012; 2014).

Other important archaeological evidence relevant to urbanization and the growth of the state in the West African forest and forest fringes relates to the Yoruba people of south-western Nigeria, many of whose larger settlements were individual city-states that collectively constituted a city-state culture (Peel 2000). As Bascom wrote: 'They are undoubtedly the most urban of all African peoples' (Bascom 1955: 446). Studies of this phenomenon, however, have concentrated on historical sources, most of which are of nineteenth-century date. There has been less concern about origins, probably because many people assume that the impressive urban developments in most cases do not predate 1800. Indeed, the early-nineteenth-century Fulani attacks on northern Yorubaland, and the Yoruba civil wars that followed, do seem to have played a substantial part in the development of the urban pattern that now exists. Nevertheless, some large urban centres, such as Ijebu-Ode, clearly did exist amongst the Yoruba at an earlier date (Fletcher 1998: 128), and archaeological investigations are beginning to show this. Excavation and oral tradition have also indicated that Early Osogbo, a small town on the Upper Osun River, originated in the late sixteenth century (Ogundiran 2014). Particularly important, however, were the excavations and survey during the 1970s by Robert Soper at the site of Old Oyo, in the southern savanna, which as the capital of a large Yoruba state was at the

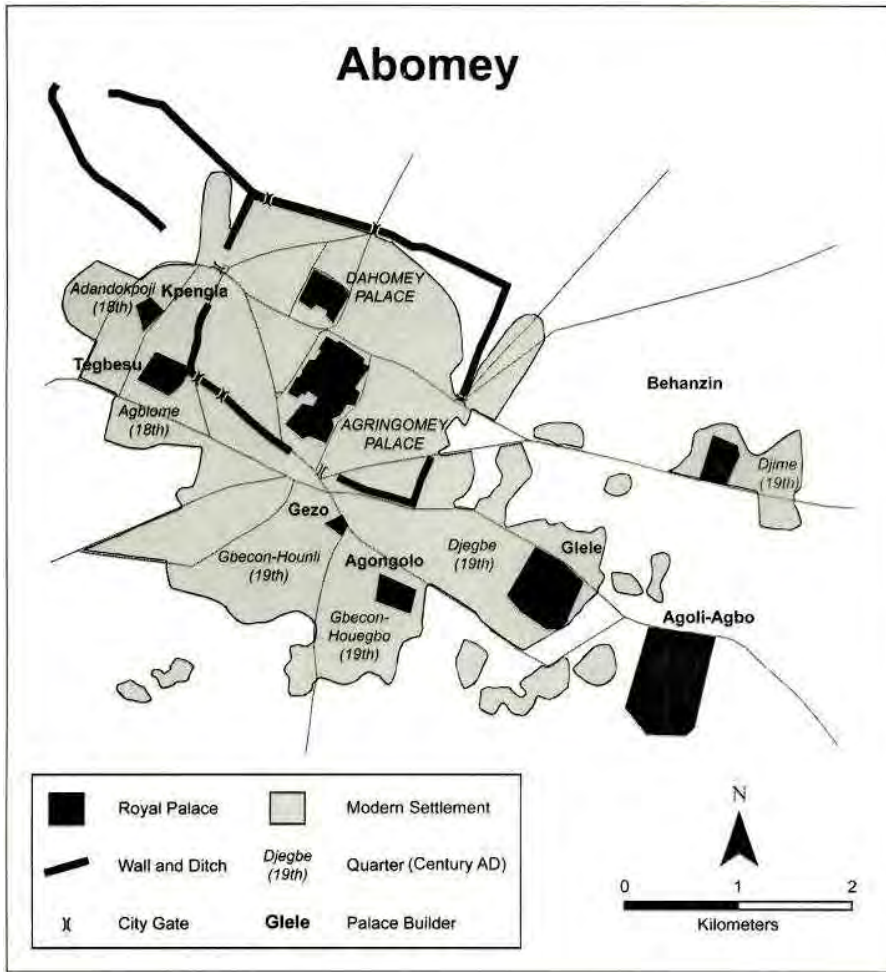


Fig. 7.3 Plan of Abomey, Republic of Benin, showing the royal palaces and the remains of the bank and ditch system. After Monroe 2014: fig. 5.5.

height of its power in the seventeenth and eighteenth centuries AD. In common with many Yoruba towns and cities (Usman 2004), Old Oyo was surrounded by a complex of earthen banks and ditches, from a study of which Soper and Darling (1980) were able to gain some idea of the shape of the former settlement and to suggest a tentative relative chronology for its development (Fig. 7.4). Soper (1993) also surveyed the site of the ruler's palace within Old Oyo and showed how closely its plan compared with that of the pre-1979 parts of the palace in the present city of Oyo, which lies about 130 kilometres to the south. Radiocarbon dates from the excavations

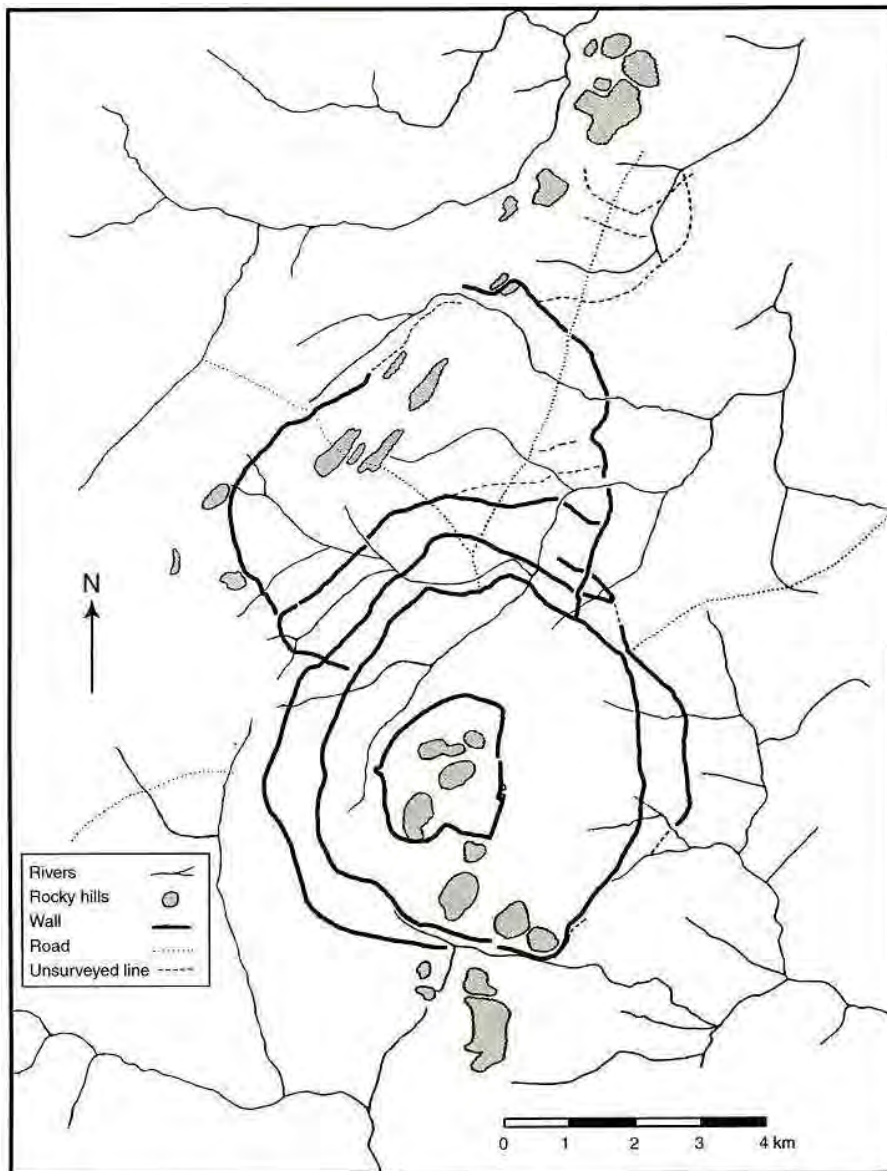


Fig. 7.4 Plan of the city walls of Old Oyo, Nigeria. After Soper and Darling 1980: fig. 1.

at Old Oyo indicate the existence of a substantial settlement of more than 1 square kilometre as early as the twelfth century AD (and perhaps as early as the eighth century), which apparently pre-dated the earthwork complex (Calvocoressi and David 1979: 19-20, 27; Agbaje-Williams 1990: 369).

Old Oyo was, however, only the most important of numerous towns abandoned in the southern savanna as a result of the Fulani attacks. Near Old Oyo, Agbaje-Williams (1990) drew attention to the sites of Koso and Ipapo Ile, both of which have defensive earthworks.

Even now Yoruba towns and cities tend to be concentrated in the transitional zone between grassland and forest. Archaeologically, the most important of those in the northern part of the forest itself is Ife, where according to Yoruba traditions the world was created. Ife has remained of spiritual and ceremonial importance to the Yoruba, and the remarkable terracottas, copper-based alloy castings, and stone sculptures discovered there since the beginning of the twentieth century have focused archaeological activity on this site (Willett 1967). The art itself suggests emerging social stratification, for some of it represents personages of importance (Fig. 7.5); in addition, art on such a scale implies patronage, particularly because the items of copper-based alloys are made from materials that were probably imported (Willett and Sayre 2006). Excavations in the present city of Ife (which covers the area of the ancient city), by Frank Willett, Ekpo Eyo (Eyo 1974), and Peter Garlake, produced a radiocarbon chronology suggesting that occupation commenced during the late first millennium AD. Archaeological deposits at Ife are difficult to excavate, and rarely has mud walling been isolated in the generally shallow deposits. Nevertheless, the excavation of pavements of edge-laid potsherds and small stones has provided some indication of the layout of domestic buildings (Willett 1967: figs. 16 and 17, plate 66; Garlake 1974: figs. 3 and 4; 1977: figs. 4 and 8). The main period during which such pavements were made has been dated by radiocarbon to approximately the twelfth to the fifteenth century, and both radiocarbon and thermoluminescence dates have been used to suggest that the most important period of Ife art was in the late fourteenth to early fifteenth century. Little, however, can be said of the growth of the city itself, although a series of concentric city walls (Fig. 7.6) suggests several phases in which the city grew up around the palace of the ruler (Ozanne 1969). These walls have not been adequately dated, and at least some of them belonged to only the last few centuries. It seems, nevertheless, that the ancient city must have covered a considerable area. Garlake (1977: 92) suggested that it was probably at least as large as the nineteenth-century walled town, because two of the excavated sites lie outside the western wall of that town while another lies beside and just beyond the eastern wall. He also claimed: 'There are strong indications that buildings were sufficiently compact and close together for the settlement to be ranked as urban.' In addition, this was an urban development with a thriving technological base, not only in metal casting but also in other activities, probably including the manufacture of glass from its primary materials (Freestone 2006; Lankton et al. 2006; Babalola 2011).



Fig. 7.5 'Bronze' casting of an Oni of Ife. Height 467 millimetres. The Frank Willett Collection. Image courtesy of The Hunterian, University of Glasgow 2014.

More archaeological evidence relevant to the present discussion comes from Benin City, also in southern Nigeria. Benin (not to be confused with the Republic of Benin) is archaeologically fascinating not only because it is deep

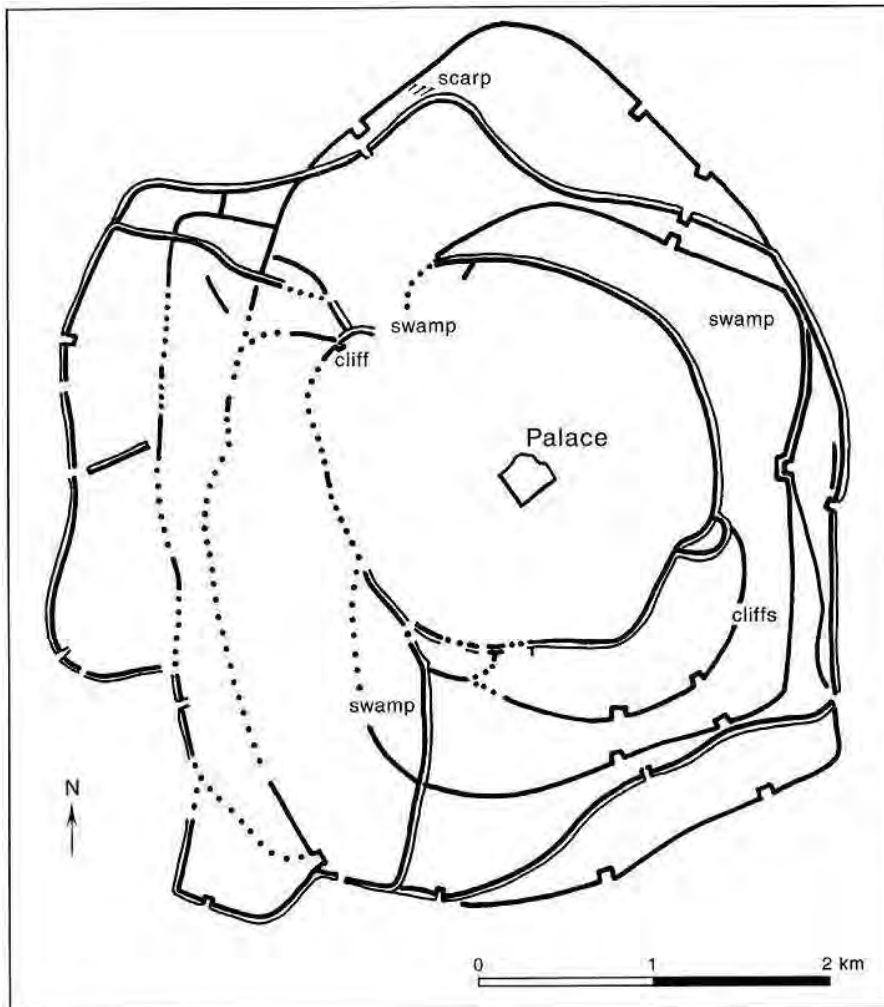


Fig. 7.6 Plan of Ife city walls, Nigeria. Single lines represent earlier walls, double lines later walls. After Ozanne 1969.

within the rainforest but also because its origins are still unclear. Excavations during the 1950s by Goodwin (1957) and by myself during the 1960s (Connah 1975) revealed substantial post-European-contact deposits (i.e. dating from after the late fifteenth century AD) on the site of the old palace. However, my own work also demonstrated occupation of the city by about the thirteenth century. The principal evidence for this consisted of radiocarbon dates for a mass burial of at least forty-one young women, who lay at a depth of more than 12.5 metres in a narrow, well-like cistern (Fig. 7.7). Wearing clothing, bracelets, finger rings, and beads, they appeared to have been dropped down the deep

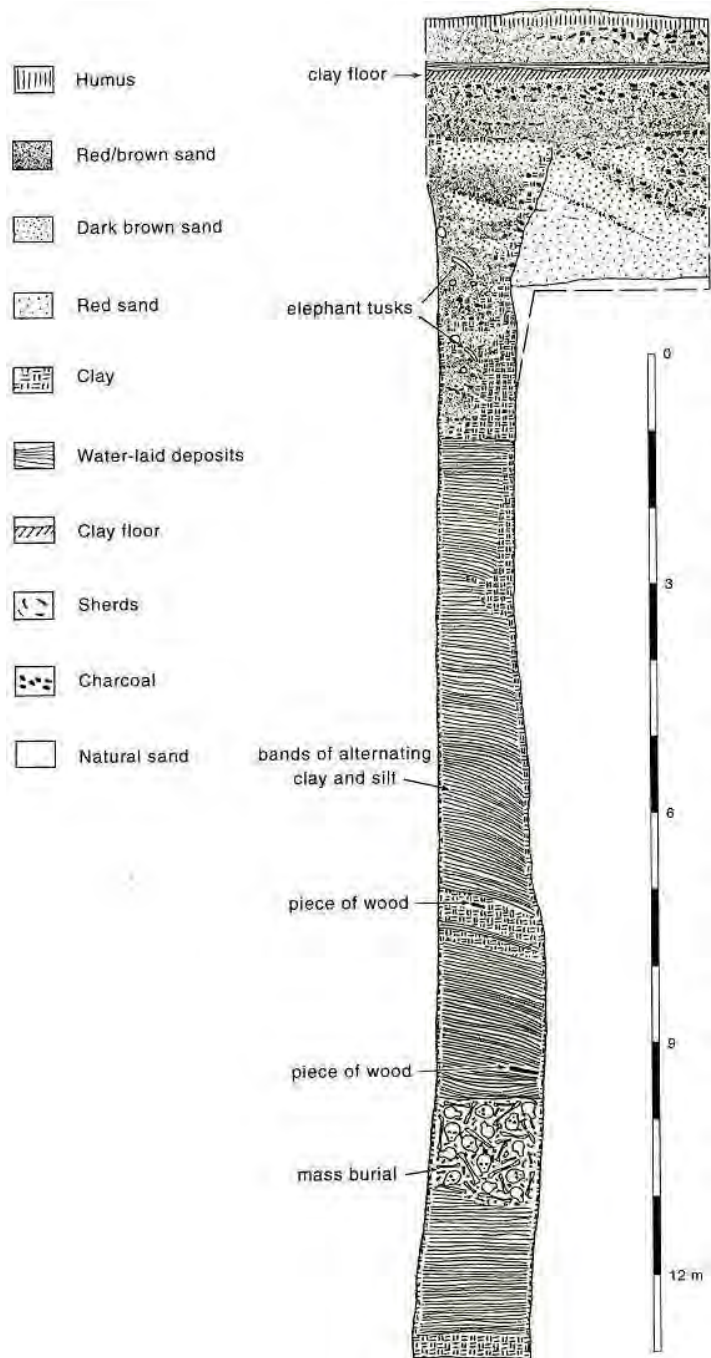


Fig. 7.7 Section of shaft containing mass sacrifice, Benin City, Nigeria. After Connah 1975: fig. 18.

shaft in which they were found and must surely represent ritual sacrifice indicative of centralized authority, particularly as the shaft lay within the area of the old palace. There is documentary evidence for throwing the bodies of sacrificial victims into such pits as late as 1897 (Roth 1903). Deep beneath the modern city of Benin there must surely be other similar pits, and it is possible that some of them could be older than the one excavated. The 1960s excavations also showed that edge-laid potsherd pavements had been made in Benin City during or prior to the fourteenth century AD, a practice that appears to have ended before European contact. As at Ife, such pavements suggest the existence of formal architecture. Indeed, there is ethnohistoric, ethnographic, and archaeological evidence for postcontact architecture in coursed mud in Benin City. This was distinguished by tall, steep-roofed entrances (Fagg 1963: plate 35); horizontally grooved, polished red mud walls (Connah 1975: plates 8 and 17); and a plan in which rooms were arranged around a series of rectangular courtyards open to the sky, called impluvia (Roth 1903: figs. 180 and 185; Connah 1975: plate 1). An important example of a chief's house, which survived a fire that destroyed much of the city at the time of its British conquest in 1897, is Ogiamien's House, with its formal plan of rooms built in coursed mud that combined domestic and symbolic-sacred functions (Fig. 7.8). Its 'location and

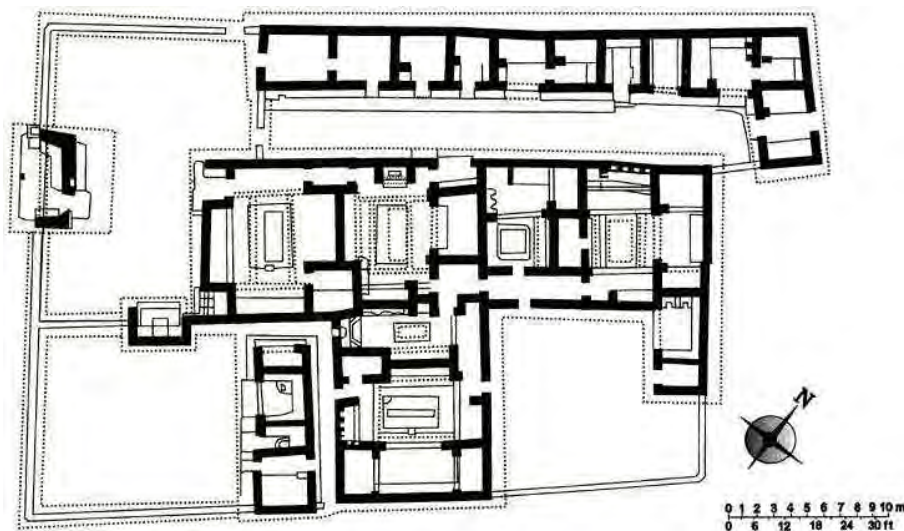


Fig. 7.8 Ground plan of Ogiamien's House, Benin City, Nigeria. Solid black indicates coursed mud walls of the main structure, open lines are compound walls, dotted lines show roof edges, and some other lines within rooms represent impluvia. The main entrance is to the left, and the row of rooms at the top are wives' quarters, with a menstruation room at the extreme right. Nevadomsky et al. 2014: fig. 1. Reproduced with permission of Springer Science+Business Media, New York, and Copyright Clearance Center's RightsLink.

design' have been claimed as 'roughly a thousand years old' (Nevadomsky et al. 2014: 67), but there is no archaeological evidence for such antiquity. Attempts to improve the dating of this house are overdue and might include dendrochronology of its major timber components or thermoluminescence of samples from its mud-wall cores.

Also important are the so-called Benin City walls, the innermost of which has been demonstrated by radiocarbon dating, historical documentation, and oral tradition to have been constructed before European contact, possibly around the middle of the fifteenth century (Connah 1975). Consisting of a massive earthen bank and ditch, with a total vertical height, from the excavated bottom of the ditch to the top of the surviving bank, of as much as 17.4 metres and a circumference of 11.6 kilometres, this earthwork represents an enormous investment of human effort that must have been directed by a powerful centralized authority. Calculations have suggested that its construction would have absorbed 5,000 people occupied for ten hours a day, if it had been completed in one dry season, or 1,000 people if spread over five dry seasons. The direction of labour on such a massive project must have implications of the greatest significance for our enquiry into state formation. That is not the whole story, however, because surveys by myself during the 1960s in the tangled vegetation around Benin City revealed a vast network of further interlocking enclosures, consisting of more than 145 kilometres of earthworks. These appeared to hint at a process of synoecism ('the union of several towns or villages into or under one capital city' (*Oxford English Dictionary* 1933)) by which a group of villages had developed into a city, at a date prior to the construction of the innermost and most massive of the 'walls'.

Subsequent work by Darling (1984; 1988; 1998) and by others (Maliphant et al. 1976; Roese 1981) showed that even this outer network mapped by me (Connah 1975) was only a small peripheral part of more extensive rural earthwork enclosures. These cover an area of about 6,500 square kilometres, with an estimated total length in excess of 16,000 kilometres (Fig. 7.9). At least 150,000,000 person-hours of work over several centuries are implied. As Darling showed, these earthworks probably have more to tell us about the process of state formation (reflecting power struggles for agricultural land) than about the urban origins of Benin City itself. Indeed, on the basis of the distribution and character of the earthworks and of a statistical analysis of surface-collected potsherds, he proposed a settlement model for both the Benin area and that of Ishan to its north from the late first millennium AD onwards. He argued that there was 'a strong southward colonization by savannah/savannah-forest ecotone Edo speakers [Edo is the language of Benin] into the rainforest'. The area over which this movement is thought to have taken place has a dense network of enclosures, 'whereas there is an almost total

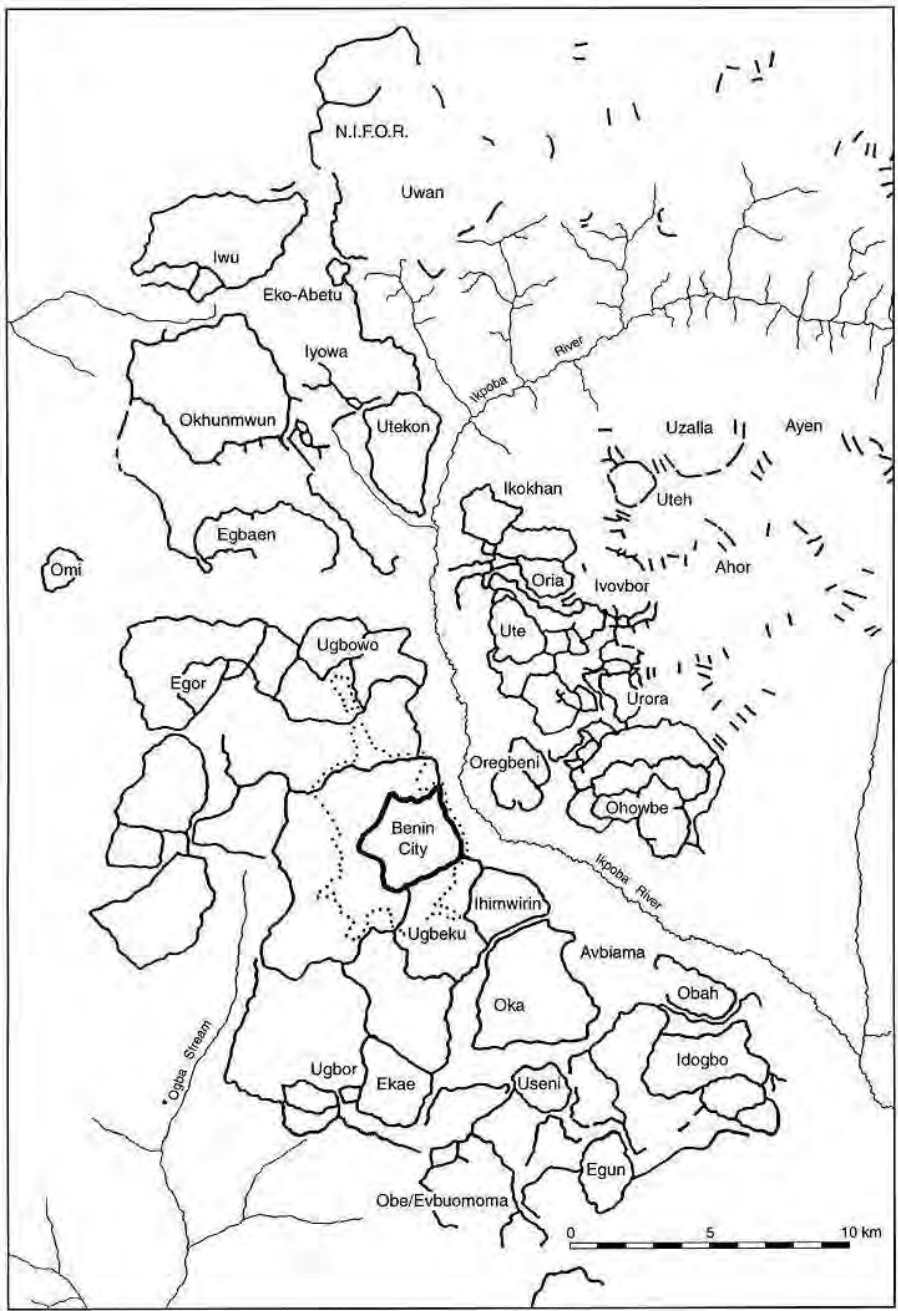


Fig. 7.9 Earthwork enclosures in the Benin City area. Dotted line indicates limits of modern city in the 1960s to 1970s. After Darling 1982.

absence of them amongst the Urhobo speakers' just to the south (Darling 1988: 122–3). Darling could well be right, but as he admitted, his archaeological survey remains 'largely undated' (Darling 1988: 133). It is regrettable that a satisfactory series of radiocarbon dates for the land surfaces beneath these earthworks has still not been obtained. Six radiocarbon determinations are available, but two of them give 'modern' dates, one gives a nineteenth-century date, and three give dates in the thirteenth to fifteenth centuries (Sutton 1982: 309, 312). Furthermore, the other radiocarbon dates for Benin City, obtained by myself in the 1960s, need to be replaced by modern assessments now that techniques have improved so greatly.

Chronological problems also remain regarding the artistic use of copper-base alloys in Benin. My excavations of the 1960s showed that these materials were used artistically as early as the thirteenth century AD, but those excavations recovered no evidence of casting these metals prior to European contact. In spite of the numerous artistic studies that have been made of the famous Benin castings (e.g., Forman et al. 1960; Dark 1973), we still have little evidence about their detailed chronology. In view of the implications of these castings, indicating both an hierarchical power structure and considerable artistic patronage, it is unfortunate that so few have been recovered from controlled stratigraphic excavations. Although a small number of Benin castings have been dated on the basis of the thermoluminescence of fired clay core remaining within them, they were all found to date from about the fifteenth century AD or later (Willet and Fleming 1976). Nevertheless, stable lead isotope analysis indicated that the source of the metal used in both Ife and during an early period in Benin was faraway France (Willet and Sayre 2006: 77), an indication of the extent of the trading networks in which these cities participated.

A question concerning Benin City and the state of which it formed the capital is whether they were always within the rainforest. As von Hellermann (2010) suggested, it is possible that forest density has varied through time; both climatic change and human activity could have created more open conditions in the past (p. 187). Talbot and Delibrias (1977) found evidence of drier conditions between 700 and 200 years ago in their investigations of Lake Bosumtwi, in Ghana, and some historical accounts support their interpretation. In addition, the extensive earthworks in the Benin City region discussed above are useless as boundaries in the heavily overgrown conditions in which many are now situated. The ditches and banks are virtually invisible in dense rainforest or regrowth. They must have been constructed when there was far less vegetation cover than at present. Rees (in Connah 1975: 237–42) raised the possibility of a formerly different environment in an area of forest near Benin City that was cleared for planting oil palms; he found pits and mounds

as well as earthworks, indicating denser settlement in the past. Technology now exists in the form of aerial LiDAR (light detection and ranging) that can see through the vegetation in order to investigate this possibility (Eve 2014).

Archaeological evidence seemingly irrelevant to state formation and urbanization comes from Igbo-Ukwu, east of the River Niger in Nigeria. This is in an area occupied by the Igbo people, who have long interested anthropologists precisely because they developed neither cities nor states until recent times, in spite of a high population density. As late as the 1930s the Igbo could still boast that 'there is no one who owns us' (that is to say: we have no rulers), and their society remained characterized by 'a dispersal rather than a concentration of authority' (Green 1947: 145, 73). What, then, is one to make of Igbo-Ukwu, where the burial of a clearly important individual (Fig. 7.10), a repository of sophisticated regalia, and a ritual pit produced, amongst other things, 685 copper and bronze objects and some 165,000 stone and glass beads? Thurstan Shaw, the excavator of this site, suggested that this indicates the former existence of a local 'priest king' who was the holder of a politico-ritual title in the democratized title-taking system of this area (Shaw 1970; 1977). Some ethnohistorical evidence supports this interpretation, although it is uncertain whether this should be applied to archaeological data a thousand years old. This date, at the end of the first millennium AD, is based on radiocarbon dates that were formerly the subject of argument, but subsequently there was a greater readiness to accept them (Posnansky 1980). The approximately tenth-century date for the Igbo-Ukwu evidence is of importance not only because of the sophisticated metallurgy and unique art forms but also because it implies early trading connections between the West African rainforest and the Mediterranean or even India. Analyses have shown that some of the copper and copper alloy probably came from the lead, zinc, and copper deposits of the Benue Rift, only 100 kilometres to the east of the site (Chikwendu et al. 1989), where there is evidence of mining dating to the end of the first millennium AD (Craddock et al. 1997). Nevertheless, stable lead isotope analysis indicated that some of the metal came from Tunisia or Morocco (Willet and Sayre 2006: 77), and the glass and carnelian beads must have resulted from trade either across the Sahara or east-west through the Sahel. Indeed, Insoll (1996a: 80) suggested that elephant ivory was being shipped north up the River Niger to Gao, from where it was transported across the desert by camel caravan. If that was the case, then Gao could have been the immediate source of many of the beads found at Igbo-Ukwu, having been sent south in exchange for the ivory but originating from more distant locations (Insoll and Shaw 1997).

Clearly there was participation in both local and long-distance trade by people living in the Igbo-Ukwu area, and some of the products of this trade

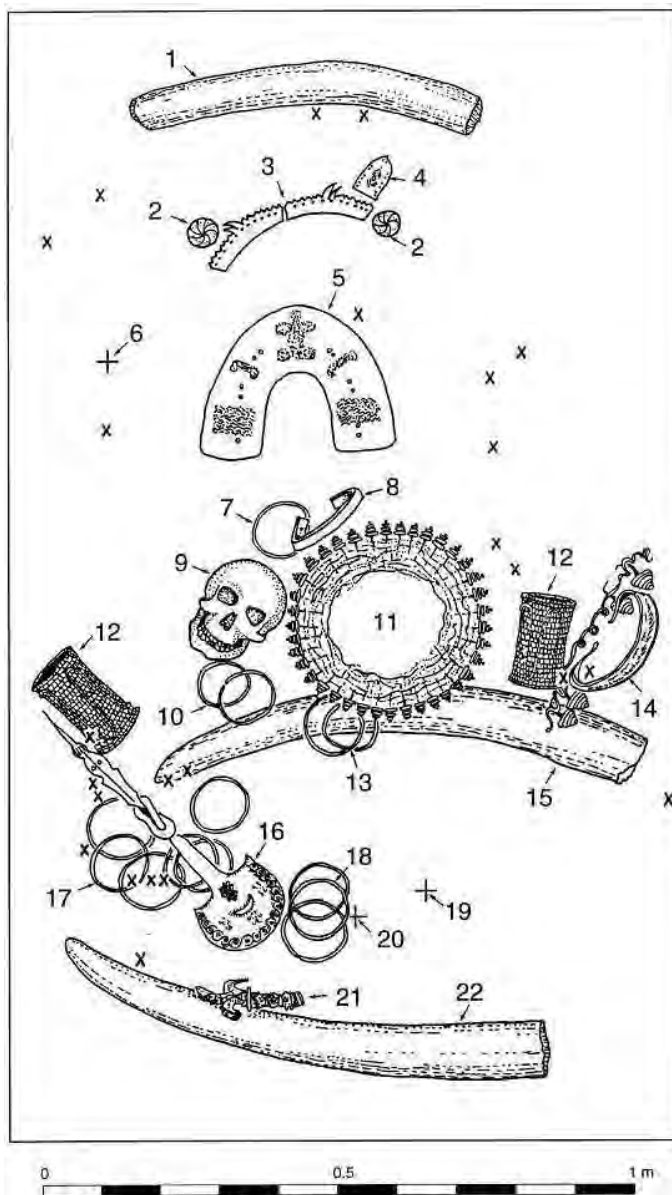


Fig. 7.10 Plan of the burial at Igbo-Ukwu, Nigeria. 1, 15, and 22, Elephant tusks; 2, decorated copper roundels; 3, crown; 4, decorated copper plate; 5, pectoral plate; 6 and 19, position of point of bracket; 7, 10, 13, 17, and 18, copper anklets; 8, copper strap; 9, skull; 11, spiral copper bosses set in wood: remains of stool; 12, beaded armlets; 14, copper handle for calabash; 16, copper fan holder; 20, position of point of rod supporting bronze leopard's skull; 21, bronze horseman hilt; X, iron nails and staples. After Shaw 1970: fig. 14.

were concentrated on one individual. Elsewhere, such archaeological evidence would probably be thought indicative of an emergent state or a ranked chiefdom. Until we know more about the late first millennium AD in this part of Nigeria, there are three tentative conclusions. First, we should be careful when deducing sociopolitical organization from archaeological evidence for 'rich burials'. Second, the social and political organization observed in any area during the last few centuries does not necessarily indicate the situation a thousand years ago; societies are dynamic, not static. Third, Igboland raises questions about the nature of West African urbanism. In 1955 this region had one of the densest populations in Nigeria, with estimates for some areas of 'well over 1000 per square mile [259 hectares]' (Buchanan and Pugh 1955: 60). Perhaps for mainly socioeconomic reasons, Igbo settlement was dispersed rather than nucleated, like that of the Yoruba, each Igbo farmstead lying in the middle of its own cultivated area near a road or bush path. Given such population densities, it seems pointless to ask about the 'absence' of urbanism.

Subsistence economy

Unfortunately, forest soils are usually destructive of bone, and the recovery of botanical evidence by means of flotation has sometimes been neglected. However, the preservation of organic materials in the Benin cistern containing the sacrificed women suggests that exceptional conditions do exist if archaeologists can find them. Meanwhile, evidence from the second millennium BC Kintampo sites, at the junction of forest and savanna in Ghana, remains of value even for this later period. From these sites there is evidence of domesticated dwarf sheep or goats and possibly of small domesticated cattle. In addition, cowpeas, oil palm, and perhaps yam were exploited, although it is unknown whether these were domesticated or not, and several wild plants were also eaten. Similarly, faunal and artefactual evidence indicates that hunting and fishing remained a significant part of the basic subsistence (Stahl 2005a; Watson 2005a; 2005b). To the north, in the southern savanna, the second to first millennium BC Kintampo site of Birimi showed that pearl millet (*Pennisetum glaucum*) was grown (D'Andrea et al. 2001); this savanna crop was also being cultivated in the rainforest of southern Cameroon during the first millennium BC, suggesting a period of forest recession (Kahlheber et al. 2009).

From sites of the late first millennium AD or early second millennium AD, there is less evidence for subsistence. At Daboya the faunal remains indicated the presence of domesticated cattle, sheep, or goats and chicken or guinea fowl over the last 2,000 years or so, and wild animals remained an important resource. However, the site provided no evidence for domesticated plants

(Shinnie and Kense 1989: 223–7). At Bono Manso the faunal material indicated the keeping of goats and chickens, as well as the exploitation of wild species, but little bone was recovered and most was undiagnostic. Furthermore, most of the bones came from the later phases, and, again, there was no evidence for cultivated plants (Effah-Gyamfi 1985: 98–9). In the case of Ife there is slight evidence of sheep or goat associated with potsherd pavements (Garlake 1977: 91), and terracottas of a bull and of a ram's head were found at Lafogido (in Ife) in a twelfth-century context (Eyo 1974). As for Benin City, there is no evidence of value (Connah 1975: 218), and although the ritual disposal pit at Igbo-Ukwu yielded a moderate number of bones, they were all of wild though edible fauna, a circumstance perhaps explained by the presumed ritual character of the pit (Shaw 1970: vol. 1, 247–8).

With so little direct archaeological evidence, it is necessary to fall back on indirect evidence and on evidence from nonarchaeological sources. As already discussed (p. 188), there were substantial plant-food resources in the rain-forest, and all the sites that have been mentioned are situated within the West African 'yam zone' (Figs. 6.1 and 6.2). Furthermore, those sites tend to be in the more northern parts of the forest or in the southern savanna, where yams and oil palm originally grew more readily, and it is those plants that are likely to have become the major components in forest subsistence (D'Andrea et al. 2006). The main deficiency would probably have been animal protein, as in recent times, but small numbers of dwarf goats and cattle, large quantities of fish, and extensive hunting in the forest (Gautier and Van Neer 2005) could have rendered this less of a problem than it is for the present, exploding population. Overall, this food-production system was almost certainly indigenous in its development and of substantial antiquity. Pottery, ground stone axes, and possible sickle components appear at the Nigerian rock shelter of Iwo Eleru during the last 5,000 years BC (Shaw and Daniels 1984: 55), and during the last few millennia BC many of the stone-using peoples of the forest made pick-like and hoe-like implements, which some archaeologists have interpreted as digging tools for the collection and eventual cultivation of yams. Sowunmi (1993: 15) detected a 'sharp rise' in the occurrence of oil palm at about 800 BC in a Niger delta deposit, along with the appearance of weeds of cultivation. Furthermore, those trypanosomiasis-resistant goats and cattle must have taken a considerable time to acquire the resistance that enables them to survive in the forest.

Apparently, by the end of the first millennium AD, and perhaps 1,000 or 2,000 years earlier, a sound agricultural system had grown up on the interflaves of the more northerly parts of the forest. This system was based on the rotational bush-fallow cultivation of extensive areas of forest land, which were cleared by slashing and burning and then abandoned to regeneration when

soil exhaustion reduced productivity. The possibility that this human impact, combined with climatic change, led to a more open landscape in some parts of the forest must also be considered (von Hellermann 2010). One of the main crops was probably yams, and yams are a food that can be stored and transported. Therefore, it seems likely that by the early second millennium AD the subsistence economy of the rainforest was able to produce a surplus and to provide adequate support for the growing social complexity of which the archaeological record provides evidence. Then, during the later second millennium AD, the subsistence of the area was subject to major changes brought on by the participation of West Africa in the Atlantic trade (Stahl 2001; Ogundiran and Falola 2007; Monroe and Ogundiran 2012). Maize, cassava, various beans, tobacco, and other plants from the Americas were added to the economy. In addition, the acquisition of European trade goods from the coast had important socioeconomic consequences that stimulated the substantial urban and state developments in the West African forest and its margins that were observed by early European travellers but had originated earlier.

Technology

Killick (2004) and Alpern (2005) have reviewed the evidence for early iron smelting in Africa, and it seems that at least some of the occupants of the West African forest were working iron from early in the first millennium AD and probably earlier. Smelting was already present at Hani in Ghana, just north of the forest, by about the second century AD, and evidence from Nsukka, in eastern Nigeria, and Obobogo, in Cameroon, indicates that in the southern savanna smelting probably commenced in the second half of the first millennium BC (Okafor 1993; Woodhouse 1998). Also, iron objects from probable graves at Akonétye, in southern Cameroon, date from the first half of the first millennium AD (Meister and Eggert 2008). At the earliest Nsukka sites, the smelters were already using furnaces that were 'extremely efficient' (McIntosh 1994: 174). Certainly the iron-working skills of West African forest peoples became in time highly sophisticated; there is evidence of this by the end of the first millennium AD at Igbo-Ukwu (Shaw 1970: vol. 1, 97–103). Also, the description by Bellamy (1904), recording the operation of an impressive induced-draught furnace near Oyo in Yorubaland, indicates a long-established tradition. The adoption of iron by people living in and on the fringes of the forest must have made the agricultural exploitation of those zones more practicable than previously, enabling cultivation on a scale that could support communities of increasing size.

In addition to the working of iron, copper and copper-base alloys were being handled with great skill by the close of the first millennium AD. The

evidence from Igbo-Ukwu shows that both lost-wax casting and smithing and chasing had been mastered. Indeed, by the second quarter of the second millennium AD, metalsmiths in Ife were also producing copper-base alloy castings of a technical excellence and an artistic refinement that is very impressive. A little later, craftsmen in Benin City were excelling in a similar fashion, and the Akan were producing copper-alloy weights for weighing gold dust, as well as casting an impressive range of jewellery in gold. Modern experts have described the Igbo-Ukwu material as ‘extremely ambitious in design and executed by highly skilled and experienced craftsmen’ (Craddock and Picton 1986: 4).

Perhaps the most impressive aspect of the forest-dwellers’ technology, however, was its diversity. Thus the artists of ancient Ife excelled in the making of terracotta representations as well as ones of copper-base alloy. Furthermore, they also carved hard stone such as granite-gneiss and quartz, to produce accomplished sculptures. Some of these were decorated in a distinctive way, by driving iron nails into holes drilled into the stone (Willett 1967: 79–84, plates 72–4, 77–9). Also at Ife, the complex pavements of potsherds and stones hint at considerable architectural sophistication, a sophistication that was still apparent in the much later mud palaces of some Yoruba rulers. Indeed, some of the coursed-mud architecture of the West African forest was quite remarkable. That of the Asante, for instance, with its polished red and white walls decorated with low reliefs (e.g., McLeod 1981: 56), remained an impressive demonstration of what was possible in this building material, as also did that of Benin, with its polished, fluted red walls. Indeed, Benin City has provided a time capsule of traditional technology in the form of the varied collection of objects looted from the city at the time of its capture by the British in 1897 (e.g., Pitt Rivers 1900). The Bini were proficient not only in iron working, ‘brass working’, and building but also in carpentry, wood and ivory carving, mud and terracotta sculpture, pottery, leather working, weaving, and beadwork (Dark 1973). In addition, the earthworks in the Benin and Ishan areas suggest an understanding of surveying and civil engineering, as well as a capacity to move monumental amounts of earth.

The full range of technological skills amongst some forest communities, during the last 500 to 1,000 years, is too great to discuss in detail, but two other activities deserve a mention. First, a number of sites at Ife have yielded evidence of glass melting, in the form of fragments of crucibles coated with waste glass (e.g., Garlake 1977: 89–90). This might mean only that imported glass was being melted to turn into beads or other small objects (Willett 1977: 22), or it could mean that glass was being made from its primary materials, as now seems likely (Freestone 2006; Lankton et al. 2006; Babalola 2011). Radiocarbon dates for a site described as a glass-bead-making factory indicate

a date between the late eleventh and the fourteenth centuries (Sutton 1982: 309, 312). Second, although there has been little archaeological investigation of gold mining in southern Ghana, there are ethnohistorical accounts of mining in the Akan forest to a depth of as much as 46 metres. Clearly, the miners must have known a considerable amount about their craft. Traces of mining have also been reported in the Nigerian lead, zinc, and copper deposits east of Igbo-Ukwu, where open cuts and tunnelling reached depths of about 10 metres (Chikwendu et al. 1989: 31). A radiocarbon date in the tenth century AD, for charcoal associated with mining debris, suggests that these mines were in use at the time that the Igbo-Ukwu copper and copper-alloy objects were being made (McIntosh 1994: 176; Craddock et al. 1997). Awaiting further investigation are the tunnels and spoil heaps of iron-ore mining in the Republic of Benin, thought to date to the first half of the second millennium AD (Randsborg 2010: 81).

Thus by early in the second millennium AD, if not before, there was a varied and sophisticated level of technology in at least some of the West African forest communities. There must have been a growth in functional specialization amongst the societies concerned.

Social system

Ethnohistorical and oral sources have more to tell us about social organization in the West African rainforest during the last half millennium than does archaeological evidence. Nevertheless, the latter can augment the other sources, and it is our major source of information for the crucial earlier formative periods. Archaeological data indicate that by late in the first millennium AD, or early in the second millennium, there was growing social stratification in some locations based on the control of trade resources and agricultural surplus. This took place particularly in the northerly parts of the forest and in the forest-savanna ecotone. It led in some places to increasing centralization of authority, particularly in the form of divine kingship. The copper-base alloy castings of Ife and Benin are evidence of that institution and, in the case of Benin, of the social and political hierarchy that supported it. In particular, it seems likely that the famous 'bronze' heads of Ife were made for attachment to wooden bodies which, provided with clothing, crowns, and other regalia, were carried in funeral processions of rulers, members of their families, and perhaps some of their more important chiefs. Such figures could have represented not only the deceased but also the authority of the office that he or she had held, much as was the case in Medieval and Early Modern Europe where similar practices were recorded (Willett 1966). Furthermore, some idea of the power that such authority could wield is given by the

thirteenth-century sacrificial victims at Benin and by the scale of the earthworks of that city and its surrounding settlements.

Similarly, whatever the sociopolitical significance of the Igbo-Ukwu evidence, it clearly indicates a concentration of ‘wealth’ on one individual, an individual who held institutionalized power of some sort. The burial is especially persuasive in this respect. As shown in Caroline Sassoon’s reconstruction painting (Shaw 1970: vol. 1, frontispiece; McIntosh 1999: fig. 1.2), the deceased sat on an ornamented stool, clothed, crowned, and with regalia and jewellery. It is likely that stools were already symbols of authority, as was later the case with the Asante of Ghana (McLeod 1981: 112–18). Indeed, some stools of exceptional workmanship from Benin, made of wood or of copper alloy (e.g., Pitt Rivers 1900: plate 41; Roth 1903: figs. 111 and 112; Dark 1973: plate 40), and from Ife, carved out of stone (e.g., Willett 1967: plate 77), must have had a similar role. Regrettably, we still lack structural evidence such as the layout of palace buildings, other than much later examples at Old Oyo, Benin City, or Abomey. Nevertheless, the material record does provide signs of emergent city-states in the West African forest by early in the second millennium AD.

There are also signs of urbanization by this time; at the very least Begho, Bono Manso, Ife, and Benin were already of increasing size with tendencies to nucleation. Archaeological evidence for the beginnings of urbanization in the West African forest is poor, but technological developments suggest a growth of specialist crafts, and with this a growth in functional specialization within society that Mabogunje thought fundamental to the development of urbanization. Furthermore, it seems that by the early second millennium AD, Mabogunje’s ‘limiting conditions’ (p. 5) for urbanization were also being met in some parts of the West African forest. There was almost certainly a surplus of food; there were in some areas small groups of people able to exercise power; and very likely there was a class of traders and merchants. In some places, however, whether or not these conditions were met, urbanization did not take place. There is the example of the Igbo people of eastern Nigeria who, in spite of what might have been a large population, developed a form of sociopolitical organization that was dispersed rather than nucleated. The origins of Igbo society would merit careful archaeological examination, for if we understood why there were no Igbo cities, then we might understand more about the overall process of urbanization in the West African rainforest. Roderick McIntosh (2005) might well have the answer, as discussed in [Chapter 6](#), with his idea of heterarchy, authority arranged horizontally, rather than hierarchy, authority arranged vertically. It is apparent that large numbers of people living in a small area might choose different ways of organizing their society.

Population pressures

The West African rainforest would appear to be an unlikely place for population pressures; there seems to be almost limitless unused land, and water stress is not as acute as in the savanna. Indeed, it is possible that the iron-using farmers of the first and early second millennium AD did enjoy for some centuries a virtual 'frontier' situation, in which there was always sufficient fresh land to meet increases in population. This might even be the reason why urbanization and state development were apparently later phenomena in the forest than in the savanna.

However, Darling's work around Benin City showed that forest soils and environments varied in their attractiveness to farmers. It seems probable that the best farmlands were situated on the upper interfluvies, where the vegetation might have been easier to clear and the soils were better drained. Also there seems to have been a preference for ecotonal environments on the fringes of the forest. Given a rotational bush-fallow agricultural system of the sort practised in the forest during recent centuries, each piece of farmland would have to be fallowed for ten to fifteen years, after only three or four years of cultivation. During those brief periods of cultivation each piece of land would be relatively productive and capable of producing a food surplus. This might stimulate population growth, but a time would come when the best land would become harder to find, unless farmers reduced the fallowing period, thereby reducing productivity and food supplies. This is supposition, but for the area around Benin City, Allison (1962: 244) produced evidence that most of the forest had been farmed at one time or another. Indeed, the vast pattern of earthworks mapped by Darling (1984) is surely indicative of an expanding farming population competing for land. Communities do not indulge in such monumental labour unless there is good reason. Whether such competition existed also in other areas of the West African forest remains to be seen. The area occupied by the Igbo, for instance, has been said to have 'among the poorest of Nigerian soils – highly leached, extremely acid, suited only to a limited range of crops and eroding rapidly under conditions of overcropping' (Buchanan and Pugh 1955: 60). It might be that population dispersal was the most appropriate strategy for dealing with such generally poor soils, whereas nucleation on areas of better soils tended to take place where there was a greater variation in soil quality. There is also the possibility that climatic change and human impact altered the environment in the past, with a drier, more open landscape between 700 and 200 years ago, followed by a moister, more forested one in recent centuries (p. 205). This could have resulted in a high population density that led to political turmoil and warfare as conditions changed and to the decline in which British observers found the Benin state at the end of the nineteenth century (von Hellermann 2010).

Ideology

Prior to European contact, the religions of West African forest peoples seem to have consisted of a varied collection of beliefs. From ethnohistorical sources and oral tradition, it appears that pantheons of deities as well as ancestors played a part in these beliefs and that the ruler of a community often fulfilled the function of its chief priest. Thus in Benin City the Oba appears to have been the principal officiant in major religious ceremonies (Bradbury 1957: 52–60), and at least some of these involved human sacrifices in which the victim or victims were asked to carry a message to the gods (Roth 1903: 71–2). Likewise, the Oni of Ife was a spiritual leader; the Akan chiefs seem to have had spiritual as well as temporal powers (McLeod 1981); and rulers of Dahomey reinforced their control with rituals that included human sacrifices (Monroe 2012). Therefore, ideology might have played a crucial role in the emergence of West African forest states, particularly as a means of legitimizing and reinforcing centralized authority. In view of the importance of a food surplus in the development of both states and cities, it is interesting that in many parts of the forest and its fringes some of the most significant ceremonies of the religious year were concerned with the yam harvest.

There is some archaeological evidence that suggests that the role of religion might have been similar in the early centuries of the second millennium AD. In Ife, for instance, Garlake excavated fourteenth-century altars built into the edge of potsherd pavements and comparable to those dedicated to past Obas that were still to be seen in the royal palace of Benin late in the twentieth century (Garlake 1977: 69). At Benin itself there is evidence of human sacrifice in the thirteenth century. In addition, many of the Benin copper-base alloy castings of sixteenth- to nineteenth-century date, particularly those in the form of human heads, apparently represented former Obas and were important liturgical furnishings of the altars (Gore 2007). The ‘bronze’ and terracotta heads from Ife of fourteenth- to fifteenth-century date were perhaps intended for similar use or, in some cases, for funeral ceremonies. Herbert (1984: 302) suggested that such items were ‘actual containers of power’, not merely ‘passive signifiers’ of it. For earlier periods, however, the interpretation of religious symbolism can be difficult, such as with the thousand-year-old Igbo-Ukwu evidence for the existence of a ‘priest king’ (Shaw 1977). Nevertheless, whatever its significance might be, that site does suggest that the combining of spiritual and temporal authority is indeed an ancient practice in the West African forest. An amalgam of deeply embedded beliefs, rituals, and state-sponsored violence underpinned a number of the forest hierarchies and their rulers.

External trade

In [Chapter 6](#) (p. 151) it was argued that the range of environments in West Africa would have provided both the necessity and the occasion for the exchange of raw materials and products across environmental boundaries. Thus one might expect an early development of regional trading both within and between the various ecozones and ecotones of West Africa. The forest and forest fringes must have played a part in such development, just as the drier savanna and Sahel to their north did. Furthermore, the wooded savanna in between these contrasting environments, sometimes referred to as the ‘Middle Belt’, would have provided a vital trading link between the two, although one that needs more attention from archaeologists ([Casey 2010](#)). Forest products that were probably exchanged in local markets and traded to greater distances could have included yams, other vegetables, vegetable oils, palm wine, dried fish, salt, Melegueta pepper, kola nuts, dyewoods, various gums, cloth, pots, canoes, charcoal, ivory, gold, and slaves. A number of these stimulated long-distance trade, particularly gold, ivory, slaves, pepper, and kola nuts. By the end of the first millennium AD some of these were being carried across the Sahara, and by the middle of the second millennium AD seaborne European traders were seeking them on the coast and, in addition, developing what was to become an almost insatiable demand for vegetable oils. Because of its gold production, it has been claimed that ‘West Africa was for centuries a center of the world economy’ ([Kea 2012: 347](#)).

In return for their exports, the forest and forest fringes received an assortment of goods, of which luxury items that gave status to the recipients formed a substantial part. This is not to deny that meat-on-the-hoof from the savanna was important in the forest probably from an early date or that salt from the Sahara must have reached as far south. Nevertheless, it appears that amongst the most important of the commodities reaching the forest from the Saharan trade were copper-base alloys, either as ingots or manufactures. These were much sought after by peoples of the forest, and from the time of their arrival on the West African coast European traders were quick to take advantage of this demand. Clearly, copper and its alloys were luxury materials of considerable sociopolitical and economic importance. There is evidence that France was one source of the metal used in Ife and of that used at an early date in Benin City ([Willett and Sayre 2006: 77](#)), a remarkable indication of the extent of the trading networks in which these cities participated, involving European, Mediterranean, Saharan, Sahelian, savanna, and forest transportation systems. In addition, cowrie shells were an important commodity traded into the forest, originally across the Sahara but eventually to the coast on European ships ([Johnson 1970a; 1970b; Hogendorn and Johnson 1986](#)). It has been

estimated that about 16 billion cowries were brought into West Africa during the seventeenth and eighteenth centuries (Ogundiran 2007: 94). Used both decoratively and as currency, their possession was again an important indicator of status. The same could be said of many of the other imports to the West African forest. As indicated by European records of ships' cargoes, there was a demand for a variety of manufactured goods, particularly glass beads, coral beads, fine cloths, metalware of all sorts (especially iron knives), iron bars, alcohol, tobacco, gunpowder, guns, and mirrors (Ryder 1969). One of the most remarkable status symbols, however, was the horse. Used in the forest fringes, horses were also known as deep in the forest as Benin City; they were brought there from the savanna and, in later times, occasionally from European traders on the coast (Law 1980a). With trypanosomiasis in the forest, it is unlikely that horses could have lived long in such an environment. It would seem that their use in Benin represented a remarkable example of conspicuous consumption.

Much of the above is based on ethnohistory and oral tradition, mainly from post-European-contact times. The advent of European traders on the West African coast, from the sixteenth century onwards, reversed the orientation of trade from north to south; incoming commodities increasingly came via the coast, outgoing ones went the same way (Monroe and Ogundiran 2012). The trans-Saharan trade gradually faded away, so that by the twentieth century little of it survived. Consequently, to find evidence of external trade in the forest, from before about 500 years ago, we must turn to archaeology. The most important of such evidence is Igbo-Ukwu. Although it seems that some of the metal used in the items of copper-base alloy at that site came from no great distance (Chikwendu et al. 1989), it appears that the rest came from North Africa (Willett and Sayre 2006: 77), and the large number of glass and carnelian beads must imply similar or other trading links. So must the mounted horse or donkey on one of the Igbo-Ukwu castings (Shaw 1970: vol. 2, plates 365 and 366). Even if based on another work of art rather than on direct observation, this indicates a connection with the savanna. Sutton (1991) suggested trading contacts with Egypt and Nubia, and although an Indian origin has often been assumed for the carnelian because of an apparent lack of African sources, it 'occurs abundantly' in Egypt (Lucas and Harris 1962: 391).

However, irrespective of where the beads came from, the problem is to know what the people of Igbo-Ukwu were giving in exchange. Shaw (1970: vol. 1, 284-5) suggested ivory, in the form of elephant tusks, and added that probably slaves and perhaps kola nuts had also been exported. His suggestions seem reasonable, but the location of Igbo-Ukwu in the northern margin of the forest, near to the Niger River and not far from the Niger Delta, makes one wonder whether salt, dried fish, and perhaps other delta products might also have been

amongst the goods traded to the north. As already mentioned (p. 206), Insoll (1996a: 80) suggested that some of the ivory was carried up the River Niger to Gao, from where it was fed into the Saharan trade, and that Gao might therefore have been the immediate source of many of the beads found at Igbo-Ukwu, whatever their remoter origin. Indeed, beads excavated from Gao are similar to those from Igbo-Ukwu (Insoll and Shaw 1997). However, Sutton (1991: 154) pointed out that both elephants (for ivory) and people (as slaves) were common south of the Sahara a thousand years ago, and he argued that to produce so much wealth as far south as Igbo-Ukwu there must have been 'some other valued commodity specific to that place'. It is an important point because, whatever else they represent, the objects found at Igbo-Ukwu do indicate a considerable concentration of wealth, which (on present knowledge) was unique in that region at that time. Sutton has suggested that the special commodity might have been silver, which apparently occurs in small quantities in copper ore in south-eastern Nigeria, and of which traces have been found in the copper-alloy objects from Igbo-Ukwu. It is an attractive idea, for here indeed was a rare commodity of considerable international value at the relevant time, particularly sought after for use in the currencies of both the Islamic and Christian worlds. However, Craddock et al. (1997: 424) have described Sutton's suggestion that silver was being smelted in the Igbo-Ukwu area as 'very unlikely'.

Further to the west, the location of Begho and other sites thought to relate to the early Akan states is surely indicative of an early trade in gold and other forest commodities. To the south of Begho lay many of West Africa's gold mines and substantial resources of kola. To the north lay more gold mines, and the Akan states seem to have developed astride a major trade route from the coast to the region of Jenné in the Inland Niger Delta. Copper-base alloy basins and bowls that have survived in eight or more localities in the Akan area provide some confirmation of this trade. These appear to have had a North African origin; indeed, three items from Nsawkaw have Arabic inscriptions, and one of those three is thought to be possibly of fourteenth-century date. Also remarkable is the fourteenth-century English bronze jug that was amongst the loot taken by the British from Kumasi in 1896. However, there was probably a wider range of imports into the Akan area than such items would suggest. Similarly, the commodities exported could have consisted of things other than just gold and kola, such as ivory, dried fish, slaves, and salt. It was on this part of the coast of West Africa that an eighteenth-century European visitor recorded salt production (by seawater evaporation) on such a scale that a number of storehouses were seen which each contained about 50 tonnes of salt (Nenquin 1961: 115-16).

At both Ife and Benin City the only firm archaeological evidence for external trade prior to European contact consists of items of copper-base alloys.

Craddock and Picton (1986: 9) found 'significant analytical differences' between such metal used at these places from the thirteenth to the fifteenth century AD and that which had been used at Igbo-Ukwu, 'showing that new sources of metal, probably imported, were now used'. Indeed, Willett and Sayre (2006: 77) have since suggested that France was its most likely origin. To some extent this reflects the growth of a trans-Saharan trade in brass, which European maritime trade later took over. As an indication of the range of pre-European trade within the forest itself, by the fourteenth century objects of copper-base alloys were even reaching the Niger Delta, implying canoe-borne trading. In the case of Ife, it has been suggested that a trade route ran north from Yorubaland to a crossing of the Niger below Bussa, where copper-base-alloy castings known as the 'Tsoede Bronzes' were found. Significantly, some of these contain a small percentage of zinc, which suggests the use of imported brass from the Saharan trade (Craddock and Picton 1986: 8–9). This could have been an important trade route from the forest zone, and the commodities probably traded out of Yorubaland would have been kola nuts (important in the savanna because kola is the only stimulant permitted by Islam), ivory, salt, dried fish, and slaves. Similar goods would probably have been exported from Benin City, although Melegueta pepper was probably more important than kola. Also trade in vegetable oils is likely to have long pre-dated European contact. The location of Benin City seems never to have been adequately explained in terms of trade routes, although it was well placed to maintain contact with both the Niger Delta to its south and the Niger River to its east.

Although direct archaeological evidence is limited, there seems no doubt that external trade was important for the peoples of the West African forest and its margins long before European traders arrived on the coast. Such trade had probably commenced at least by the first millennium AD, and its origins might be much earlier. Although long-distance contacts with trans-Saharan trade must have stimulated the movement and procurement of certain commodities, there seems no reason why the inauguration of such contacts should be claimed as the beginning of forest-zone trade. It appears that a regional network of trade routes existed in West Africa before the advent of the Arab trans-Saharan trade. Such a network must have included the forest and its margins, as well as the wooded savanna to their north.

Conclusion

Why did cities and states develop in the West African rainforest and its fringes? Why should dense settlements and hierarchical social systems appear in this region? Many explanations have drawn on external trade to explain such developments, and indeed they took place at approximately the same time as

the appearance of Arab trade across the Sahara. Such an external stimulus hypothesis remains untested, however, until we know more about the archaeology of the first millennium AD within the forest and adjacent environments. Until then, it seems almost certain that the origins of these cities and states lay within the forest and its margins. The forest possessed abundant resources and the potential to produce a food surplus. By early in the first millennium AD there existed an iron-based technology sufficiently sophisticated to exploit the forest environment more successfully than before. The diversity of this technology gave rise to functional specialization, and this, probably combined with localized population pressures reflecting variations in land productivity and short-term climatic change, helped to stimulate the growth of larger, more heterogeneous communities. It was possibly population pressures also that in certain areas led to an increasing stratification of society, in which control of resources fell into fewer and fewer hands. In some places this culminated in centralization of authority on one individual, whose power was frequently reinforced by the assumption of spiritual as well as temporal attributes, with social control expressed as state-sponsored violence. This situation seems to have developed by the early second millennium AD, if not before.

However, one cannot ignore the part that trade, both local and external, did play in the development of urbanization and state formation in this zone. It was an important factor in the growth and location of cities. Such cities tended to be located in the northern part of the forest or even in the southern savanna, so that they were situated at the interface between donkey transport and human portage. There was also a tendency for them to be located on important trade routes. In addition, the growth of states within this zone was undoubtedly stimulated by control of trading resources or of the trade routes. As Law (1978) showed, for instance, West African rulers in later times drew their incomes both directly and indirectly from trade. Furthermore, imported commodities provided both status symbols to enhance the position of local rulers and a source of moveable wealth that could be used to reward supporters. It is little wonder that rulers in the West African forest often insisted that it was their right to control the trade that was carried on in their territories, particularly after Europeans drew West Africa into the Atlantic world during the second half of the second millennium AD. Trade, however, was only one factor in the appearance of cities and states in the West African forest, and, like other factors, its origins were probably within that zone rather than external to it.