

Fields of change

Progress in African archaeobotany

• EDITED BY

René Cappers

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The intertwined history of the silk-cotton and baobab

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Both the silk-cotton (*Ceiba pentandra*) and the baobab (*Adansonia digitata*) are widely associated with human settlement in West Africa and neither species is part of the 'natural' vegetation but owe their distribution to human activity. The paper reviews the ethnobotany of both species and the evidence for their dispersal in both prehistoric and historical times. The vernacular names seem to have been exchanged between species to another in areas where the trees co-exist. The paper analyses the biogeographical and linguistic evidence and suggests that the accepted models are at best problematic.

"Quand elles ne sont pas méconnues, les fonctions de l'arbre dans les civilisations africaines sont généralement sous-estimées." Paul Pélissier (1980)

1 Introduction

How natural the vegetation of West-Central Africa is can be a matter for debate, but there is little doubt that human beings have been manipulating the distribution of various species of economic or ritual importance for some considerable time. Among the species whose Africa-wide distribution is very striking are the baobab (*Adansonia digitata*) and the silk-cotton (*Ceiba pentandra*). Neither are truly native to the continent; the baobab probably originated in Madagascar where all its relatives occur, while *Ceiba* apparently originated in the Americas. Both trees have economic uses, but it is unlikely that this is the primary reason for their spread; both are large, impressive and somewhat oddly-shaped and have been incorporated into ritual systems almost everywhere they occur.

This paper¹ explores the history and ethnobotany of the baobab and the silk-cotton and in particular looks at a phenomenon that might be called 'conceptual crossover'. Put simply, the silk-cotton apparently spread across the continent from West to East and the baobab the other way. At some highly speculative point in prehistory, the two trees must have 'met' one another, as they diffused in opposite directions. At this juncture, populations using them seem to have confused or at least conceptualised the two as similar, because both names and ideas about the trees are exchanged between species. The paper looks at the origin and spread of these species and then tabulates a sample of vernacular names in diverse African languages, to exemplify this process.

2 Origins and distribution

2.1 Baobab

Baobabs are members of the Bombacaceae, a pan-tropical family containing a number of well-known economically important plants like kapok, balsa and durian (Baum, 1995a; Baum, Small & Wendel, 1998). Six of the eight species of baobabs are restricted to western and southern Madagascar, a seventh is endemic to northwestern Australia, and the eighth is widespread in sub-Saharan Africa but now introduced by humans throughout the warm tropics (Armstrong 1983; Bowman 1997). The African baobab is the best known of the eight species. All baobabs are deciduous trees ranging in height from five to 30 meters with leaves with segments that radiate somewhat like the fingers of a hand, showy flowers, and large, many-seeded gourdlike fruits covered with a velvety thatch of hairs. The baobab is the subject of several popular reviews in addition to technical monographs (e.g. Codjia *et al.*, 2001; Sidibe & Williams, 2002; Bash, 2002; Pakenham, 2004; Wickens *in press*). Figure 1 shows a characteristic baobab in the Nuba mountains in Southern Kordofan.

In height, trunk shape, and girth, there is no such thing as a typical baobab, but the tremendous size of some African baobabs suggests that individual trees may be several thousand years old. Like many large tropical trees, the baobab has no reliable tree rings, and size does not necessarily indicate age because variation in water content of the trunk can cause large fluctuations. Adanson (1771), who first attempted age

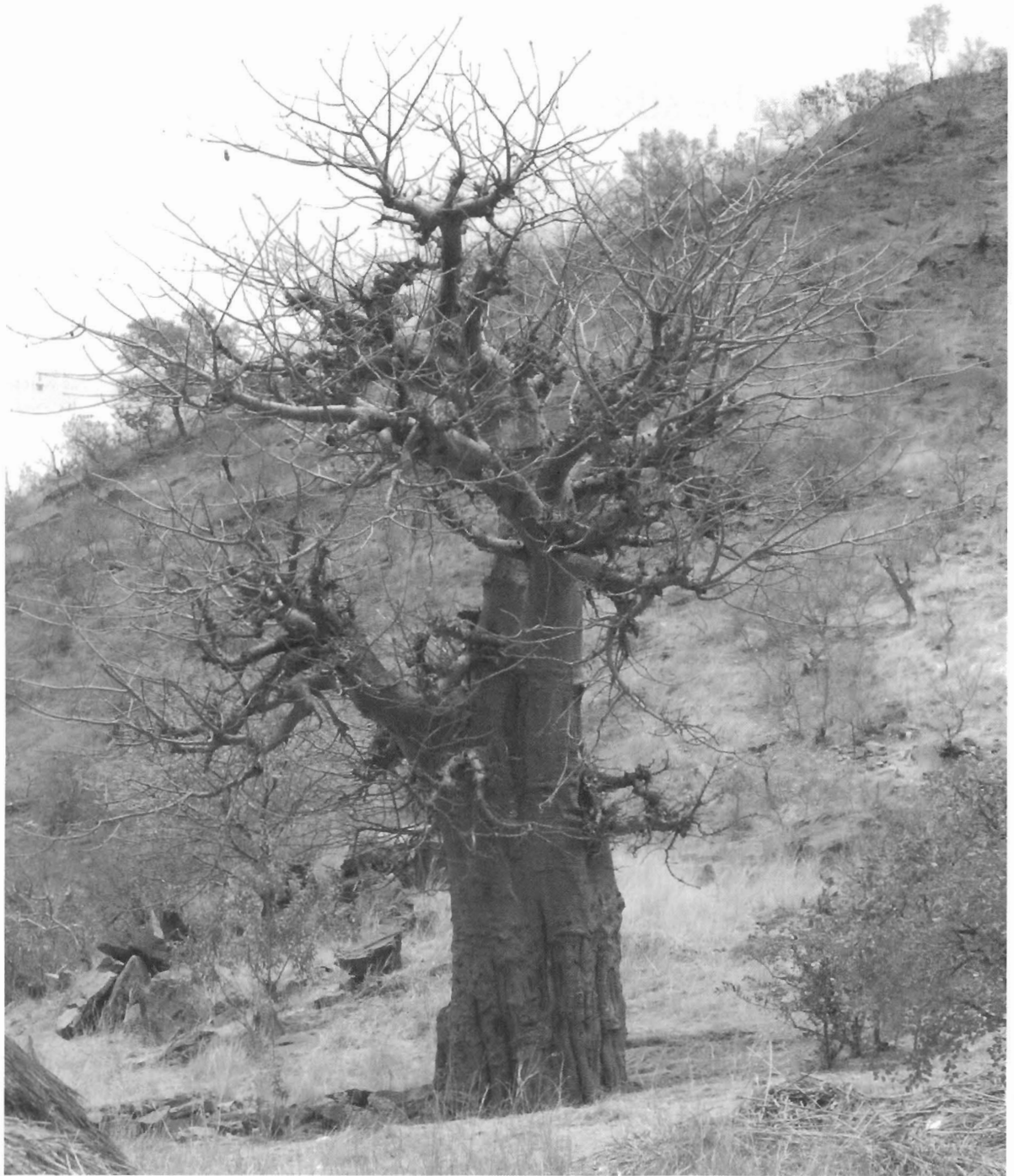


Figure 1: Baobab in the Nuba mountains.

calculations, estimated that two trees on an island off Cape Verde were 5150 years old. Swart (1963) who radiocarbon-dated a tree 4.5 meters in diameter being cut down for the Kariba dam obtained a date of 1010 ± 100 BP and clearly trees can be older still (Von Breitenbach, 1985). Exactly how long the baobab has been spreading in Africa remains to be confirmed by

archaeobotany, but some living examples may be several thousand years old. Kahlheber (pers. comm.) has found records of baobab in Senegal, Mali and Benin, with the oldest probably at the site of Arondo on the Senegal River AD 400–1000. Germer (1985) records baobab fruits in the Turin museum and in the Louvre in Paris of Egyptian provenance, but with no location

or date. Cappers (pers. comm.) has found baobab seeds at Berenike on the Red Sea coast of Egypt, dated to the 4–5th century AD; these are likely to be imports, although whether from Yemen or further south in Africa is difficult to say.

The first recorded literary reference is by the Arab traveller Ibn Baṭṭūṭa in West Africa in AD 1352, who mentions the water-storage capacity of its massive trunk (Hamdun & King 1975: p. 30, 71). Leo Africanus also noted its presence.² The earliest description in the European literature is Scaliger in 1557, although the tree is recognisable in hindsight from some of the descriptions of fifteenth century navigators (Wickens, 1982: p. 175). The name baobab derives from the Arabic *bu hibab*, ‘fruit with many seeds’, and it is first referred to directly by Alpini (1591) who encountered its fruits for sale in Egypt. Alpini gives the name as *ba hobab*, hence the vowels of the common English name. Linnaeus gave the baobab its scientific name, *Adansonia*, in 1759, to honour the celebrated French botanist Michel Adanson (1727–1806), who lived in Senegal and who provided the first technical description and illustration of the tree.

The distribution of the baobab throughout the dry parts of Africa reflects both human activity and the depredations of elephants (Adam, 1962). Its medical and fibre uses make it essential to many communities and its shape carries numerous magico-religious associations (Owen, 1970). Its fruits represent a convenient source of food that is naturally conserved by the hard outer shell and pastoralists, in particular, often carry fruits with them. As they crack the shell and eat the seeds, trees spring up along former cattle-trails. Assogbadjo *et al.* (2005, 2006) report that baobabs show considerable genetic diversity between ecological zones in West Africa, suggesting that this reflects the east-west nature of trade routes as well as natural ecological zonation.⁴ Jaouen (1988) in a study of the vegetation of Mauritania, reports dead baobabs far into the arid zone, presumably also seeded by travellers. On the other hand, elephants are responsible both for destroying seedlings and damaging mature trees (Owen, 1974; Guy, 1982). Barnes (1980) argued that predation by elephants was gradually destroying the baobab populations in the Ruaha National Park, Tanzania. The literature suggesting that baobabs are endangered is venerable; Chevalier (1906: p. 486) considered it was disappearing³, while Perrier de la Bathie (1953: p. 214) warned of the threat to the Malagasy baobabs. But a paradoxical consequence of the widespread elimination of wildlife, especially in West Africa, is that the baobab is spreading rapidly. Pullan (1974) noted that the baobab was a key species in the intensively farmed ‘parkland’ of West Africa. In the Hadejia-Nguru Wetlands in Northeast Nigeria,

an area once rich in biodiversity but now stripped by predatory timber-cutting and poaching and starved of water by upstream extraction, the baobab has spread rapidly during the 1990s (Blench *et al.* 2003). Baobabs may thus indicate a depauperate fauna. More generally, as the indigenous forest is stripped away, and replaced by anthropic grassland, many dry-zone species, such as the tamarind and the fan-palm are moving further south. At present, the future of the Australian baobab seems secure. Survival of the African baobab and at least two Malagasy species (*A. rubrostipa* and *A. za*) also seems likely because of their comparatively widespread ranges and broad ecological tolerances. The long-term prognosis for the four Malagasy baobab species with more restricted distributions is a matter of concern because of continuing habitat destruction that goes along with population growth.

Figure 2 shows the African distribution of the baobab given by Wickens (1982). Wilson (1988: p. 200) notes that the baobab is found at more locations and at higher altitudes than this map suggests. Some of the sites on the map may be rather misleading; for example, the baobab was introduced into Gabon from Senegal as an ornamental in colonial times and thus its occurrence is both late and ‘unnatural’ (Walker, 1953; Raponda-Walker & Sillans, 1961: p. 104). Chevalier (1906: p. 492) considered that the baobab was only spontaneous in coastal areas, and its presence in the interior was due to human action; and that Islam had played an important role in this redistribution in recent centuries. He explained its absence in the heart of the continent simply by chronology, that it had simply not been spread there. Its Africa-wide distribution is quite strongly associated with river-systems, although the baobab is by no means a riverine species. This is probably a secondary effect, whereby pastoralists grazing in river valleys have increased its incidence. Armstrong (1983: p. 144) presents maps of the Malagasy species, all of which are confined to the west coast of Madagascar.

Burton-Page (1969) noted that the baobab was been spread around the Indian Ocean by Arab traders, and associates its presence in India with the export of Ḥabṣhīs, or slaves from the Horn of Africa, who were brought to India in the early Middle Ages. The baobabs in Yemen, Oman, Zanzibar and Egypt may be attributed to the same source. Ironically, the African baobab has also been reintroduced in Madagascar, presumably its original centre of origin, by settlers from Zanzibar. In the twentieth century it was carried across the world as an ornamental. Armstrong (1983: p. 146) notes that the baobab was also carried to Sri Lanka, Java and the Philippines as a result of Indian Ocean trade. It was also taken to the Caribbean in the 1890s

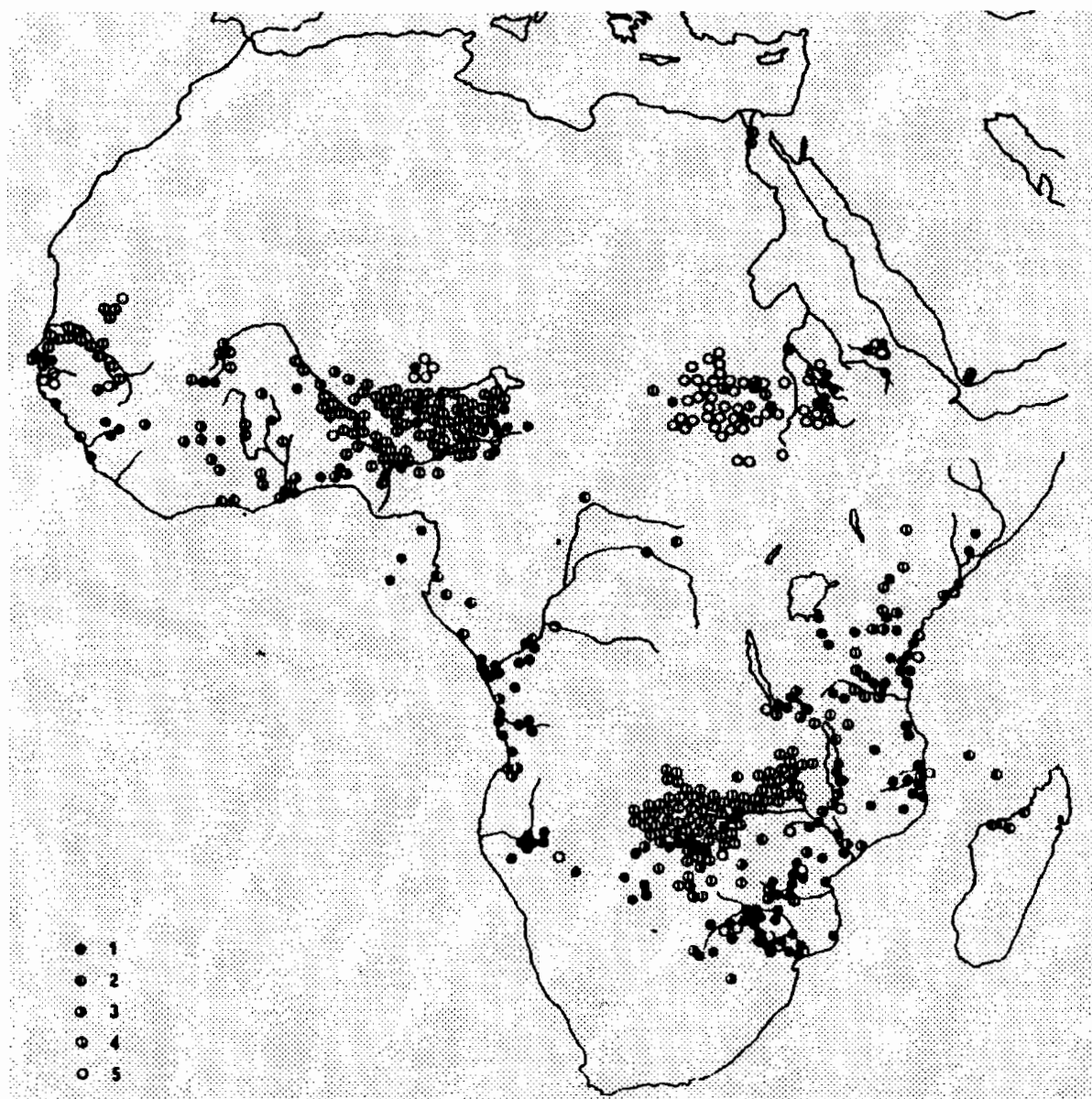


Figure 2: Africa-wide distribution of *Adansonia digitata* (Key: 1: Herbarium and flora records; 2: Cultivated or introduced; 3: Information from photographs; 4: Kew 'Baobab survey' data; 5: Data from travel literature. Source: Adapted from Wickens [1982]).

as an ornamental (Rashford 1996). Wickens (1982: p. 182) also discusses the distribution of baobabs in India. The tree has no Sanskrit name and appears to be associated with the area of Muslim influence; if so, then its introduction may be medieval. However, it is strongly associated with shrines and temples, which would suggest a greater antiquity.

Figure 3 shows the primary and secondary distributions of *A. digitata*. The Australian species, *A. gibbosa* [formerly *A. gregorii*], known as a *boab*, is something of a mystery, and it has been explained as a relic of Gondwanaland with plate tectonics accounting for its disjunct distribution. However, Armstrong (1977, 1983)

argues that the 'Gondwanic' hypothesis is inadequate⁴ and instead argues for a Tertiary era dispersal, presumably via floating seed-pods. Wickens (1982: p. 201) also concludes "There is still no satisfactory explanation for the presence of *A. gregorii* in Australia" and Bowman (1997:894) leaves the question open. It is notable however that *A. gibbosa* is part of the Malagasy section *Longitubae* which is pollinated by long-tongued hawk-moths (Baum 1995b). It has been speculated that the Australian boabs may have originated from seed pods carried for food carried either by coastal movements of early modern humans or even by Austronesian seafarers en route from Madagascar.⁵

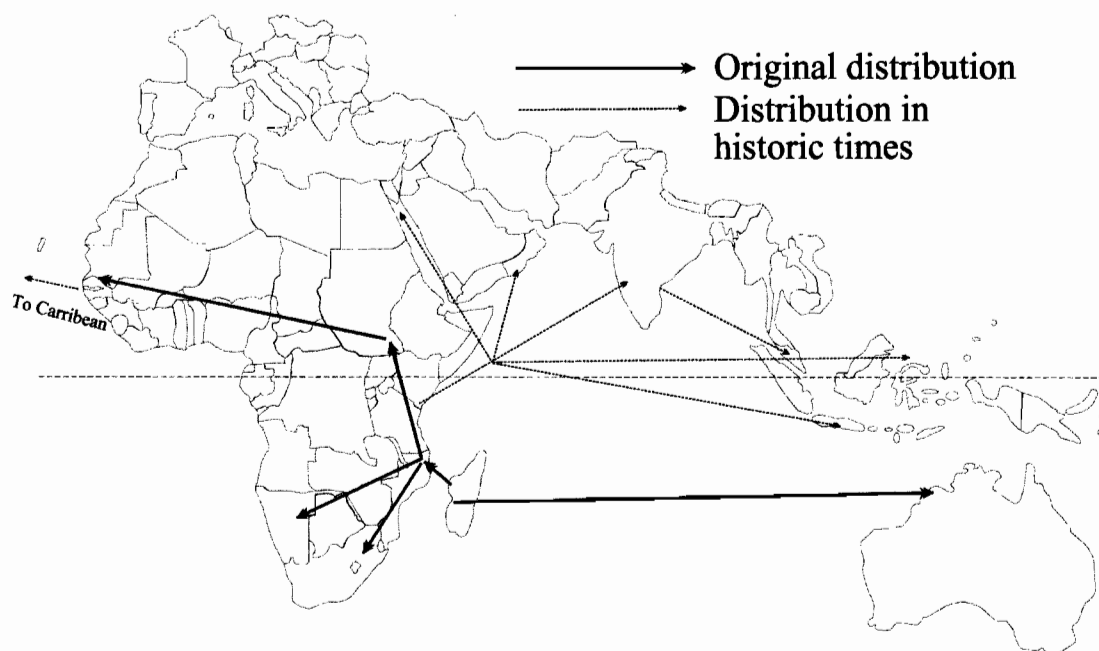


Figure 3: Worldwide distribution of *Adansonia digitata*.

2.2 Silk-cotton [kapok] *Ceiba pentandra* (L.) Gaertn. var. *pentandra* (1791)

The silk-cotton is 'a large or immense tree, the trunk with grey bark, buttressed, usually spiny, cylindrical and smooth far up, deciduous; branches in horizontal tiers; crown of leaves open; leaves of 5-9 leaflets palmately borne, each lanceolate, acuminate, glaucous beneath, entire or obscurely toothed, 7-18 cm long, 1-3.5 cm wide, distinctly petiolulate; petiole 7-20 cm long; flowers clustered on branchlets, cream-white or pale pink; 5 petals about 2.5 cm long; stamens in 5 bundles, anthers twisted; fruit oblong-ellipsoid, smooth, pendulous, 7-15 cm long, 5-celled, eventually dehiscent, the interior filled with soft long copious hairs ("kapok" or silk-cotton); seeds many, brown' (Stone, 1970). The silk-cotton is fire resistant and can sometimes become dominant in highly anthropic savannah landscapes (Swaine, 1992; Swaine *et al.*, 1992).

Chevalier (1931, 1937) was the first to point out that *Ceiba* is a Neotropical genus and the apparently ancient presence of *Ceiba* in Africa is anomalous. He counted nine species of *Ceiba*, eight of which are confined to the New World although the most recent revision suggests there are seventeen species (Gibbs & Semir, 2003). Chevalier thought that the seeds may have floated across the Atlantic attached to the floss, although this is apparently unlikely, because the seeds readily detach themselves from the floss (Burkill, 1985: p. 280). The distribution of the silk-cotton in the New World is highly anthropic (Gibbs & Semir, 2003, Fig. 6)

and it plays an important role in many indigenous cosmologies. The very similar associations in West Africa suggest that it was intentionally brought across the Atlantic. Irvine (1961:191) assumed that "it was probably introduced by the Portuguese". There appear to be few archaeobotanical records for silk-cotton in sub-Saharan Africa, but Bedaux (1972) reports both *Ceiba* and the baobab on the Dogon escarpment between the 12th and 14th centuries, *i.e.* prior to any possible Portuguese introduction.⁶ The antiquity of *Ceiba* in Africa would further seem to be confirmed by evidence for its presence further east in the Indian Ocean, for pictorial records may show that kapok had reached Java by AD 850 (Steinmann, 1934; see also Toxopeus, 1948). If so, then *Ceiba* would have had to travel across Africa from west to east and then spread around the Indian Ocean along the established maritime routes more than 1500 years ago. This also implies pre-Portuguese contacts between the east coast of South America and West Africa, a possibility usually scouted by prehistorians. However, Chevalier (1931) noted a number of species common to the east coast of South America and West Africa unlikely to have floated across on ocean currents. Indeed, there are some species that apparently went in the opposite direction; *Elaeis oleifera* is surprisingly close to the oil-palm, *Elaeis guineensis* (Henderson *et al.*, 1995: p. 165). Without more detailed distributional work, this must remain speculation.

The early presence of *Ceiba* in Southeast Asia via Indian Ocean dispersal is problematic in that *Ceiba*

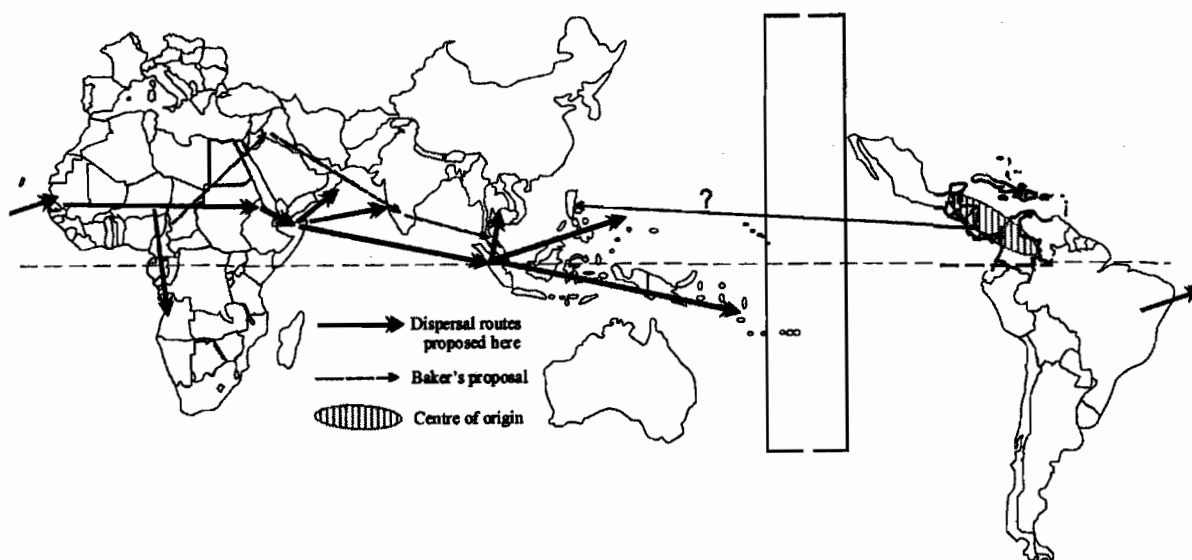


Figure 4: Worldwide dispersal of *Ceiba pentandra*.

hardly occurs in the floras of East Africa. Although Heine & Legère (1995: p. 221) note a Swahili name, *msufi*, they also observe that this tree was spread in Tanzania by the Germans. Noad & Birnie (1989: p. 37) in their tree flora of Kenya treat *Ceiba* as an exotic introduced from Central America. The solution canvassed by Baker (1965) is that cultivated kapok was introduced from West Africa to south-western Asia by the Arabs. In some ways this would explain the distributional gap, but since *Ceiba* is almost unknown in Southwest Asia and none of the vernacular names in any way indicate dispersal by Arabic-speakers, this is not easy to accept. A significant possibility is that *Ceiba* was brought from Central America to Manila by the Spanish and spread to some parts of the Pacific from the Philippines, as some of the vernacular names rather suggest (Appendix Table 3) and that Steinmann (1934) is simply wrong and has misidentified the species depicted, confusing it with one of the indigenous *Bombax* spp. In this case, the occurrences of *Ceiba* in Southeast Asia and the Pacific would all originate from the New World and thus be post-European contact. Figure 4 shows the worldwide dispersal of *Ceiba* canvassed in this paper (which imagines dispersal from the Horn of Africa) with Baker's alternative hypothesis marked separately.

3 Ethnobotany of the baobab and silk-cotton

Burkill (1985: pp. 270–274 & 278–283) provides a useful summary of the conventional ethnobotany of these two species as well as being a major source for ver-

nacular names. Simpson (1995) and Sidibe & Williams (2002) represent recent overviews of the ecology and economic potential of the baobab.

3.1 Baobab

The baobab has many uses, but the collection of pods as a food source must undoubtedly account for part of the anthropic distribution. Fibre from the bark is used to make rope, baskets, cloth, musical instrument strings, and waterproof hats. Stripping the bark from the lower trunk of most trees usually leads to their death, but baobabs not only survive, they regenerate new bark. Fresh baobab leaves provide an edible vegetable similar to spinach which is also used medicinally to treat kidney and bladder disease, asthma, insect bites, and several other maladies. The hollowed-out trunk of a living tree can be used to store water. The fruits and seeds of several species are collected, while pollen from the African and Australian baobabs is mixed with water to make glue. Hobley (1922) describes the co-association of baobabs and ruined towns on the East African coast and attributes it to the collection of the seeds as a shampoo base. Palgrave (1983: p. 588) notes that the interior of old trees crumbles into a fibrous pulp and if they die suddenly, such as after a frost, the tree can burst spontaneously into flame.

The tag of an 'upside-down' tree features in a number of purported traditional stories. Wickens (1982) recounts one in which the Creator is said to have initially planted the baobab in the rainforests of the Congo Basin, but the tree complained that the dampness made its trunk swell. So the Creator moved it to the high slopes of the Ruwenzori range, the

Table 1. The silk cotton and its conceptual relatives in Iten.

Singular	Plural		
ekum	nikum	silk-cotton tree	<i>Ceiba pentandra</i>
ekum ɛdaà nìrèè	nikum ɛdaà nìrèè	red-flowering silk-cotton tree; lit. 'silk-cotton of the [neighbouring] Kwakwi people'	<i>Bombax buonoponenze</i>
ekum nè'warâng	nikum nè'warâng	false baobab	<i>Adenium obesum</i>

Mountains of the Moon. But the baobab continued to grumble about the humidity. Angered by the incessant wailing, the Creator took the swollen trunk and tossed it into a dry part of Africa. The tree landed upside down with its roots in the air.

Baobabs are often considered the abode of witches or spirits. Luxureau (1994: p. 73) depicts an enormous split baobab in Maradi, Niger where women place money in order for it to assist them to realise their wishes. The Dompò people of Western Ghana claim to have arisen from a horseman who emerged from a split baobab that is still alive a short walk from their settlement. Alternatively, baobabs may be emblematic of the coherence of a community. In the Volta Region of Ghana, the health of specific baobabs is associated with the community; should they die, the community may break up. Livingstone (1857) mentions a baobab near the Mozambique coast with a room-sized central cavity enough to shelter an entire family. In Australia, where the baobab is known as a 'boab', the tree had similar uses. In the early Kimberley pioneering days, boabs were often temporarily used to contain prisoners. Grates were fitted to the openings, the prisoners put inside and the grate locked. Twenty kilometres from Wyndham is the Prison Tree, which still bears bolts and studs from its service as a prison.

3.2 Silk-cotton

The silk-cotton is only marginally a food-plant; its young leaves and seeds are eaten. But it has probably been spread by humans for the floss; used to stuff pillows, as tinder for fire-making and many other uses. In West Africa, there are two varieties an armed (thorny) and an unarmed cultivars. The armed *Ceiba* is commonly used for fences, as it keeps out goats and the young leaves can be regularly harvested. Raponda-Walker & Sillans (1961: p. 106) note that in Gabon the unarmed type is only found in the forest.⁷ It has been brought into plantations in Java for the kapok, although this trade is in decline due to synthetics. In addition, its important spiritual associations make it a prime candidate to spread to new village sites. The growth of chieftaincy institutions in Northern Ghana, for example, encouraged the spread of the silk-cotton because the pillows for chiefs must be filled with

kapok. Hauenstein (1997) describes the complex role played by the silk-cotton in the peoples of central Cote d'Ivoire. Irvine (1961: p. 191) notes that it is 'one of the most sacred trees of West Africa', which would be very surprising if it had really been introduced by the Portuguese.

4 Conceptualisation and vernacular terminology of baobab and silk-cotton

4.1 Vernacular terminology in Africa

Both the baobab and the silk-cotton have conceptual twins. For the baobab it is the false baobab or desert rose, *Adenium obesum*, which it resembles at the level of the trunk, although *Adenium* is much shorter and has brilliant red flowers. For the silk-cotton, it is the red-flowered silk-cotton, *Bombax buonoponenze*, a similar tree with, as advertised, red flowers. The ecological ranges of these analogues largely coincide, although the false baobab is usually confined to more semi-arid regions. Table 1 shows the basic term for *Ceiba* in Iten, a language spoken SW of the Jos Plateau in Nigeria. The baobab does not grow in this area and is known only as a Hausa loan. However, both the red-flowering silk-cotton and the false baobab are treated as relatives of the silk-cotton.

The terminology for baobabs is highly ramified in many African languages, which is indicative of its ancient establishment in many parts of the continent. As an example, Table 2 shows the terminology for the baobab and its parts in Hausa, spoken in Nigeria and Niger. The origin of many of these terms is unknown.

4.2 Analysis of vernacular names

The vernacular names for silk-cotton and baobab in Africa are tabulated in Appendix Table 1 and Appendix Table 2. The data is arranged by language phylum and within that by family. For more detail on the internal classification and terminology of African language phyla, Heine & Nurse (2000) is a recent overview. I have assigned numbers to the widespread roots for silk-cotton in the column marked 'R', indicating lexemes that should probably be grouped together.

Table 2. *Baobab terminology in Hausa.*

Term	Dialect	Gloss	Comment
Bákkò		baobab	<Fulfulde?
Bambu		baobab	
Dunku		baobab	
Gàatsúká	Kano	young baobab	
Gullutu	Kabi	baobab	
Gùntsúú		baobab seeds	
Gwàrgwámíí		baobab seeds	
Kubali	Katsina	baobab	
Kulambali	Katsina	baobab	
Kúmbálíí	Katsina	baobab flower buds	
Kúúká <i>pl. kúúkoókíí</i>		baobab	< Songhay?
Kwámè		baobab fruit	
Mùrnàà	Sokoto	baobab	

Unnumbered roots seem to be local innovations. Sources are marked in the final column, although I have tried to use commonly available collections of terms rather than citing each individual document in order to keep the bibliography to a manageable length. Skinner (1996: p. 151) discusses some etymologies for baobab. Rashford (1994) has a discussion of the association of monkeys with baobab names, but this is entirely confined to European-related languages; no African language makes this connection.

4.2.1 Baobab

Vernacular names for baobab are manifestly more diverse than those for *Ceiba*. If the distributional argument given in paragraph 2.1 is accepted, the interpretation is that the baobab only began to spread in Africa *after* the main outlines of its language phyla were established and it was diffusing east to west, *i.e.* against the direction of the expansion of Niger-Congo. As a consequence, when farming groups expanded eastwards they encountered the baobab as an unfamiliar tree and were forced to construct a name, perhaps borrowing it from resident hunter-gatherers or comparing it to a species they already knew. This is particularly the case in some names in the Plateau languages of Nigeria and further west in Mali and Cote d'Ivoire, where the terms are clearly borrowed from established names for *Ceiba*.

Despite a reconstructed Bantu form appearing in the Tervuren Lexical Reconstruction database⁸, the Bantu could not have carried the baobab with them as they expanded eastwards across the tropical forest, because it will not grow in the humid areas of Cameroun, Gabon and Congo where the Bantu are thought to have originated. They must have developed new terms once they encountered it, on emerging into the sa-

vanna. There are clearly two competing Bantu roots in Eastern and Southern Africa, “#mbuyu” and “#mura-mba” or similar. It seems possible the nearly identical forms in Swahili and Tonga might be loans rather than true genetic cognates. Nonetheless, the forms in South African Bantu languages are clearly cognate with “#mbuyu” and it is possible that the baobab was carried southwards with the Bantu expansion. An intriguing name is the Ovambo “omu-kura” which appears to resemble some West African forms. It is conceivable that the name was carried with the Bantu groups who expanded southwards along the coast of West Africa, although the humid forest that occurs there today no longer supports baobabs.

Newman (1977: p. 22) reconstructed ‘baobab’ as “*kuka” for Proto-Chadic, and observed “Kanuri *kuwa* is undoubtedly a borrowing from Chadic”. In view of the widespread presence of this root in Nilo-Saharan, this is very unlikely and the direction of borrowing is more likely the reverse. The original source of Hausa “kúúká” may have been a borrowing from the West Kainji languages, as there is considerable diversity of forms, pointing to an original “#kukpa” or “#kugba”. Alternatively, Hausa could have borrowed from Kanuri/Manga “kúwà”, since the tone-pattern is identical. But there is no doubt that roots of the “#kuka” form are widespread due to secondary borrowing from Hausa. The reason may be that the practice of drying the leaves, powdering them and selling them as soup ingredients has definitely been widely spread along the Hausa trade routes, even if they did not initiate this practice. In Nupe, for example, the baobab tree itself is “muci”, an old Nupoid root. However, the Nupe name for the leaves, “kúka”, is a relatively recent borrowing from Hausa. Forms such as Daffo are probably later borrowings from Hausa, but

Gashua Bade and Bagirmi probably derive their forms directly from Kanuri/Kanembu. If this was an old Nilo-Saharan term then it was borrowed *into* proto-Kainji, perhaps from Songhay (Dendi is today a direct neighbour of West Kainji languages). Skinner (1996) gives some rather sparse Chadic lookalikes usually referring only to tree species. The Tuareg names are very puzzling, as they are not obviously derived from other languages, and yet the baobab would not have been familiar in North Africa. Probably these are transferred from another tree species. The Malagasy names for *A. digitata* are almost all borrowed from the vernacular names for native *Adansonia* species, except in one case when Sakalava borrows from French.

4.2.2 Silk-cotton

Ceiba pentandra terms are more obviously patterned than those for baobab. The numbered roots all have interesting distributions, although II, “#kum-”, is by far the most widespread.

I. Derived from a proto-form something like “*bàntVŋ” for Central Mande languages, it also appears in a clutch of Atlantic languages, including Wolof and *Fulfulde. The extensive migrations of Fulbe pastoralists have given it currency much further east in West Africa, but it is probably most useful to think of it as characteristic of the western zone.

II. Derived from a proto-form something like “#kum-” and widespread across West Africa, also apparently spreading in to the Nilo-Saharan languages. This characteristic root suggests an early date for *Ceiba* and a link with the diffusion of Niger-Congo languages. Its widespread occurrence in Gabonese languages (see Raponda-Walker & Sillans, 1961: p. 106 for a complete list) would seem to make it a candidate* for Proto-Bantu, although the East Africanist bias of Bantu reconstructions has so far excluded it.

III. Confined to the East Mande languages and Atlantic languages that appear to have borrowed from them (although Baga Koba is hardly in contact with these languages today).

IV. Derived from a proto-form something like “#-nyǎi-”, this root is confined to the Kwa languages, but is dispersed across the family, suggesting considerable time-depth (Kwa itself being very internally divided).

V. This root is the most complex, since it appears in Nilo-Saharan, Afroasiatic and Bantu. Probably origi-

nating either in West Chadic or Nilo-Saharan, it underwent a significant change of vowel from high front /i/ to high back /u/ and was then loaned into Arabic as “rûm” and perhaps thence into Somali as “dum”. Arabic may also be the source for various Central African languages, such as Gula “rum”.

VI. This root is entirely confined to the Ijoid languages spoken in the Niger Delta in Nigeria. Kay Williamson proposes that the forms can be reconstructed to proto-Ijô which would independently indicate considerable antiquity for the tree in this region.

The presence of a distinctive root in Senufic, “#ŋeŋe”, which probably reconstructs to proto-Senufic, is good evidence for the antiquity of the silk-cotton in West Africa. The fact that it does not appear to be a loan and does not appear outside Senufic suggests some time-depth.

One of the complex etymologies yet to be fully understood is the name *pemba* or *pamba*, which occurs in NE Madagascar. This is an area under strong Swahili influence, but this is not the Swahili name, which is *msufi* and may derive from the island of Pemba. Boiteau *et al.* (1997) note that *Ceiba* on Madagascar, while an exotic, appears to be spontaneous all along the coast.

4.3 Conceptual crossover

Baobabs and silk-cotton trees may both have been introduced into the African continent by humans, and have certainly been spread by them. Both are tall, impressive trees with numerous ethnobotanical uses and both attract belief complexes. The silk-cotton appears to have spread in the same direction as the expansion of Niger-Congo languages (west to east across the continent) and for this reason, can be reconstructed to quite a high level in that phylum. The lexemes for silk-cotton are strongly associated with those for ‘death’ and ‘corpse’, and with various initiation cults. The terms for baobab are more diverse and fall less easily into patterns. This may be because the baobab spread across Africa from east to west, against the direction of flow of the expansion of Niger-Congo. At some place in Central Africa, perhaps between Nigeria and Cameroun, the two species began to co-occur, and in particular, the baobab began to take on names originally applied to the silk-cotton. Prost (1964: p. 423), discussing the vernacular names in Gur languages observes ‘*Fromager n’est pas toujours distingué de kapokier*’. Throughout this whole region the names and attributes of the two species form a complex networks of borrowings.

5 Conclusion

The history of the baobab and the silk-cotton remain little-understood, despite their economic importance, and there are various reasons for thinking that the published hypotheses do not account for all the facts. Both trees have considerable economic and spiritual importance where they are linked to village communities and it is reasonable to assume they were translocated by human action, perhaps long prior to agriculture. Vernacular names for these species certainly suggest considerable antiquity in Africa; and indeed significant exchanges of associated ideas and terminology. Presumably further work on the genetics of specimens growing in widely separated locations could contribute to unravelling some of these problems.

6 Notes

1. This paper was first given at the 4th International Workshop for African Archaeobotany Groningen, 30 June – 2 July 2003 and has since been substantially revised. I would like to thank participants at the workshop for their comments, and particular thanks to René Cappers, Dorian Fuller, Stephanie Kahlheber and Katharina Neumann for additional unpublished materials. Gerald Wickens is publishing a book on the baobab and has kindly commented at length on the present text. I have also made use of unpublished linguistic data kindly supplied by Richard Gravina, Russell Schuh, Valentin Vydrine, Kay Williamson and Guillaume Segerer to whom my thanks are due. The most recent revision was in May 2006.
2. At least, according to Wickens (1982: p. 175). However, Dietrich Rauchenberger (pers. comm.), Leo's most recent editor, finds no such reference and this may be an error.
3. "Quoi qu'il en soit, les *Adansonia* sont bien des arbres en voie de disparition"
4. "It is my view that to assume the persistence of *Adansonia* in sub-Saharan Africa, Madagascar and north-west Australia since before the fragmentation of the southern super-continent initiates more problems than it solves" (Armstrong 1983: p. 143).
5. This not as bizarre as it might first appear. Linguistic and botanical evidence for contact between Austronesians and the north coast of Australia is quite abundant. Against this, *A. gregorii*, has a high chromosome number ($2n=96$) in contrast to the lower numbers found in the Malagasy *Adansonia* spp.
6. Cappers (pers. comm.) has extracted references to Ceiba from his personal database giving dates for Nqoma am Tsodilo in Botswana at AD 9-1000 and Matlhapaneng in Botswana at AD 7-1000 which seem credible.

7. The data is too sketchy to make a strong case, but it seems possible that the contrast between the two types may represent two different introductions; the unarmed ssp. being ancient and the armed, 'cultivated' types of Portuguese vintage.

8. This can be consulted on-line at http://linguistics.africanmuseum.be/blr/BLR_Home.html.

7. References

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Websites

Baobab

Websites for baobab are numerous and often repeat the same information so I have selected the three most informative ones.

<http://www.icuc-iwmi.org/resources.htm>

http://www.museums.org.za/bio/plants/malvaceae/adansonia_digitata.htm

http://florawww.eeb.uconn.edu/acc_num/200100525.html

Silk-cotton

http://florawww.eeb.uconn.edu/acc_num/198500310.html

http://www.hear.org/pier/species/ceiba_pentandra.htm

<http://www.uog.edu/cals/site/POG/ceiba.html>

<http://www.tropilab.com/ceiba-pen.html>

http://www.tis-gdv.de/tis_e/ware/fasern/kapok/kapok.hum#informationen

8 Appendix Datasheets

Appendix Tables 1 and 2 compile vernacular names for baobab and silk-cotton in sub-Saharan Africa. I have

tried to use the most linguistically accurate transcription possible. In a language group where the same root occurs many times I have cited representative forms rather than every recorded form as the intention is to uncover geographical and linguistic patterns. RMB in the source column indicates the data is from my own fieldwork. Existing summary compilations of vernacular names for baobab in Africa are Burkill (1985) and Sidibe & Williams (2002: p. 11).

Abbreviations

AA = Afroasiatic
AN = Austronesian
KS = Khoesan
NC = Niger-Congo

NS = Nilo-Saharan
P = Phylum
R = Numbered root
RMB = own data

Appendix Table 1. Vernacular names of the baobab *Adansonia digitata* in Africa.

P	Family	Language	attestation	R	Comment	Source
NC	Dogonic	Dogon Toro	óró	? I	and many other Dogon languages	Calame-Griaule (1968)
	Kordofanian	Heiban	kwor	I	and many other Nuba languages	Andrews (1953)
		Abri	kwugwor	I		Andrews (1953)
		Tira	θor	I		RMB
	Mande	Bambara	(n)sira	IV		Bailleul (1998)
		Soninke	kide			Burkill (1985)
		Susu	kiri			Burkill (1985)
		Kono	sela	IV		Burkill (1985)
		Mende	gbowulo	II		Burkill (1985)
		Bobo-Fing	pii	II	cf. Bobo-Fing <i>Ceiba</i>	Malgras (1994)
		Guro	bélé	II	cf. root I for <i>Ceiba</i> esp. Nwan	Burkill (1985)
	Atlantic	Balanta	laté			Burkill (1985)
		Bassari	a-màk			Burkill (1985)
		Bedik	ga-mak			Burkill (1985)
		Diola Fogny	babaq			Burkill (1985)
		Fulfulde	bokki			Burkill (1985)
		Serer	bak			Burkill (1985)
		Konyagi	a-mbu	II		Burkill (1985)
		Mankanya	bedôal	II		Burkill (1985)
		Wolof	gui		cf. root I for <i>Ceiba</i> esp. Toura	Burkill (1985)
		Bijogo	u-áto			Burkill (1985)
	Kru	Guéré	go pl. gwê		cf. root I for <i>Ceiba</i> esp. Toura	Burkill (1985)
		Wobe	gblé-tu		cf. root I for <i>Ceiba</i> esp. Mwa	Burkill (1985)
	Gur	Bieri	tebu/tora			Manessy (1975)
		Tayari	ñor-ga/-əri			Manessy (1975)
		Nawdm	todde/tuura			Manessy (1975)
		Dagbane	tú-á/-hé			Manessy (1975)
		Moore	tæga/teese			Manessy (1975)
		Dagara	twoo/tooru			Manessy (1975)

Appendix Table 1. (Cont.)

P	Family	Language	attestation	R	Comment	Source
		Bwa	'iya			Malgras (1994)
	Senufic	Minyanka	zige	III		Burkill (1985)
		Senufo	zege	III		Burkill (1985)
		Supyire	zhengè	III		Burkill (1985)
						Burkill (1985)
	Kwa	Ewe	àdidó			Rongier (1995)
		Ga	sààlò	IV		Irvine (1961)
		Dangme	saletfo	IV		Burkill (1985)
		Baule	fromdo			Burkill (1985)
		Twi	ɔdɔdɛ			Irvine (1961)
			and ɔtɔtɔwaa			Irvine (1961)
		Guan	tɔtɔ			Irvine (1961)
		Brong	kɛlau	I		Irvine (1961)
	WBC					
	Kainji	Lopa	kufwə	I	cf. Hausa	RMB
		cLela	k-kubu	I	cf. Hausa	RMB
		Ror	u-kuk	I	cf. Hausa	RMB
		sSaare	u-kup	I	cf. Hausa	RMB
		Rogo	u-ub	I	cf. Hausa	RMB
						RMB
	Plateau	Kuki	upə	I	cf. root II 'silk-cotton'	RMB
		Təsu	kúkúru	I		RMB
		Hasha	ikum		cf. root II 'silk-cotton'	RMB
		Berom	kugul leng			RMB
		Jijili	ulici			RMB
						RMB
	Bantu	PB	#bòjɔ			BLR3 ¹
		PB	#dámɓà			BLR3
		Kamba	mwamba			FAO (1988)
		Swahili	mbuyu			FAO (1988)
		Embu, Meru	muramba			Maundu <i>et al.</i> (1999)
		Taita	mlamba			Maundu <i>et al.</i> (1999)
		Chewa	mlambe			FAO (1988)
		Yao	mlonje			FAO (1988)
		Ndebele	umkhomo			FAO (1988)
		Tonga	mubuyu		cf. Swahili	FAO (1988)
		Hlengwa	muwu			FAO (1988)
		North Sotho	motsoo			cf. Website 2.
		Ovambo	omukura			cf. Website 2.
		Tsonga	ximuwu			cf. Website 2.
		Tswana	movana			cf. Website 2.
		Venda	muvhuyu			cf. Website 2.
		Zulu	isimuku			cf. Website 2.
NS		Songhay	kò pl. kòà	I	cf. Hausa	Ducroz & Charles (1978)
		Dendi	kàɔ	I	cf. Hausa	Burkill (1985)
		Kanuri	kúwa	I	cf. Hausa	Burkill (1985)
		Maasai	ol-mesera			Maundu <i>et al.</i> (1999)
		Samburu	lamai			Maundu <i>et al.</i> (1999)
		Nuer	kusha			Andrews (1953)
		Dinka	dungwol			FAO (1988)
AA	Semitic	Chad Arabic	hamray pl. hamar			Julien de Pommerol (1999)
		Chad Arabic	kalakúkay pl. kalakúka	I	? <Hausa	Julien de Pommerol (1999)
		Chad Arabic	tabalday pl. tabaldi			Julien de Pommerol (1999)
		Amharic	bamba			FAO (1988)

Appendix Table 1. (Cont.)

P	Family	Language	attestation	R	Comment	Source
		Tigre	duma		cf. Somali 'silk-cotton'	FAQ (1988)
	Cushitic	Orma	yak			Maundu <i>et al.</i> (1999)
		Somali	yag			Maundu <i>et al.</i> (1999)
		Goróa	dakaa'umó			Mous & Kießling (2004)
		Alagwa	dakaa'imoo			Mous & Kießling (2004)
		Burunge	daka'u			Mous & Kießling (2004)
	Berber	Tadghaq	tákudust			Kossmann (pers. comm.)
		Iwellemeden	tadyəmt			Kossmann (pers. comm.)
	C. Chadic	Bacama	kawtə	I		Newman (1977)
		Bana	kwákwə	I		Gravina (pers. comm.)
		Daba	kákāw	I	name of fruit	Gravina (pers. comm.)
		Giziga	mbaatay			Gravina (pers. comm.)
		Hdi	ka'u	I		Gravina (pers. comm.)
		Logone Kotoko	kuka		< Hausa	Gravina (pers. comm.)
		Mada	kokormbana			Gravina (pers. comm.)
		Makary Kotoko	kalkuka	I	? < Hausa	Gravina (pers. comm.)
		Malgwə	kwakwa	I		Gravina (pers. comm.)
		Muyang	ākram			Gravina (pers. comm.)
		Podoko	huhuwá	I		Gravina (pers. comm.)
		Tera	kukwa	I	? < Hausa	Newman (1977)
		Zulgo	mátákwambúrzùm			Gravina (pers. comm.)
	W. Chadic	Hausa	kúúkà <i>pl.</i> kúúkóókíí	I	< Kanuri?	Abraham (1949)
		Bole	dəmbər			Schuh (pers. comm.)
		Ngizim	kuku	I	< Kanuri?	Newman (1977)
		Karekare	kuci	I	< Kanuri?	Newman (1977)
		Gashua Bade	kukwáu <i>pl.</i> kùkun	I	? < Hausa	Schuh (pers. comm.)
		Duwai	kuko	I	? < Hausa	Schuh (pers. comm.)
		Miya	kushi	I	< Kanuri?	Schuh (pers. comm.)
		Guruntum	kwàslà			Cosper (1999)
		Jimi	girim			Cosper (1999)
		Tal	bòkwo		? < Fulfulde	Cosper (1999)
		Boghom	mbùydí			Cosper (1999)
		Mangas	bokò		? < Fulfulde	Cosper (1999)
		Saya	dót			Cosper (1999)
		Jimi	girim			Cosper (1999)
		Polci	pát roon			Cosper (1999)
		Zul	bəlime			Cosper (1999)
		Buli	lúùn			Cosper (1999)
		Dot	róon			Cosper (1999)
		Geji	daahooli			Cosper (1999)
		Guus	dubul			Cosper (1999)
AN		Sakalava	baobaba		< French	Boiteau <i>et al.</i> (1997)
			bontona, vontona		< name for <i>Andansonia madagascarensis</i>	Boiteau <i>et al.</i> (1997)
			boringy		< name for <i>A. fony</i>	Boiteau <i>et al.</i> (1997)
			sefo			Boiteau <i>et al.</i> (1997)
			za		< name for <i>A. za</i>	Boiteau <i>et al.</i> (1997)

¹ The reconstructions are drawn from the Tervuren 'Bantu Lexical Reconstructions 3' website. As the citations show, evidence for these reconstructions is strictly confined to Eastern Africa.

Appendix Table 2. Vernacular names of the silk-cotton *Ceiba pentandra* in Africa.

P	Family	Language	attestation	R	Comment	Source
NC	Dogonic	Dogon Toro	jú			Calame-Griaule (1968)
	Ijoid	Kalabari	sikákáá	VI		Williamson (pers. comm.)
		Oiyakiri	asisayá	VI		Williamson (pers. comm.)
		Kolokuma	isagháf	VI		Williamson (pers. comm.)
		Oruma	siyáí	VI		Williamson (pers. comm.)
		proto-Ijoid	*t-sikákà, *a-sisákà	VI		Williamson (pers. comm.)
	Mande	Bambara	bàna(n)	I		Bailleul (1998)
		Mandinka	bàntaŋ	I		Vydrine (pers. comm.)
		Xasonka	bàntiŋ	I		Vydrine (pers. comm.)
		Vai	bàndá	I		Vydrine (pers. comm.)
		Lele	bàndà	I		Vydrine (pers. comm.)
		Koranko	bàndà	I		Vydrine (pers. comm.)
		Jogo	brá	I		Vydrine (pers. comm.)
		Nwan	bre	I		Prost (1953)
			bàntvŋ	I		Vydrine (pers. comm.)
		Toura	gwéè	II		Vydrine (pers. comm.)
		Wan	kwɛɛ	II		Vydrine (pers. comm.)
		Mende	ngúwò	II		Vydrine (pers. comm.)
		Loko	nguuhò	II		Vydrine (pers. comm.)
		Looma	gúò	II		Vydrine (pers. comm.)
		Kpelle	wuyɛ	II		Vydrine (pers. comm.)
		Dan	gwē	II		Vydrine (pers. comm.)
			*gwúwē	II		Vydrine (pers. comm.)
		Bisa	hor	III		Prost (1953)
		Mwa	gbure	II		Prost (1953)
		Beng	poro	III		Prost (1953)
		Yaure	fere	III		Prost (1953)
		San	ko(no)	?		Prost (1953)
		Bobo-Fing	peda	III	?	Prost (1953)
		Bobo-Fing	pirii	III	cf. Bobo-Fing 'baobab'	Malgras (1994)
		Busa	gbe	II		Burkill (1985)
	Atlantic	Baga Koba	porò	III	<E Mande	Segerer (pers. comm.)
		Balanta	rumbum			Segerer (pers. comm.)
		Banyun	kidem			Segerer (pers. comm.)
		Basari	a-ndin			Segerer (pers. comm.)
		Bedik	gi-ndii			Segerer (pers. comm.)
		Biafada	bregwe	?II		Segerer (pers. comm.)
		Bijogo	cobbe			Segerer (pers. comm.)
		Diola Flup	bosanobo		= canoe	Segerer (pers. comm.)
		Diola Fogny	busanay			Segerer (pers. comm.)
		Diola Kwataay	étufay			Segerer (pers. comm.)
		Fulfulde Senegal	batigehi	I	cf. Xasonka	Segerer (pers. comm.)
		Fulfulde Gambia	bantehi	I	cf. Xasonka	Segerer (pers. comm.)
		Serer	m-buday	I		Segerer (pers. comm.)
		Wolof	betene, bentenki	I	cf. Xasonka	Segerer (pers. comm.)
		Mandyak	pentya	I		Segerer (pers. comm.)
		Mankanya	pentene	I		Segerer (pers. comm.)
		Pepel	mecene, ntene	I		Segerer (pers. comm.)
		Kissi	banda	I	cf. Mande	Segerer (pers. comm.)
		Konyagi	a-man			Segerer (pers. comm.)

Appendix Table 2. (Cont.)

P	Family	Language	attestation	R	Comment	Source
		Non	len			Seeger (pers. comm.)
	Kru	Krao	jwe			Marchese (1983)
		Tepo	jò			Marchese (1983)
		Bete	gɔ̃	II		Marchese (1983)
		Neyo	vidā			Marchese (1983)
		Godie	gbāḍā			Marchese (1983)
		Koyo	vāḍā			Marchese (1983)
	Gur	Bieri	hun-ga/-si	II		Manessy (1975)
		Tayari	ku-m/-na	II		Manessy (1975)
		Nawdm	gom-be/-ti	II		Manessy (1975)
		Dagbane	gu-ŋwa/-nse	II		Manessy (1975)
		Moore	gu-ŋga /-msi	II		Manessy (1975)
		Bwa	tyaa			Malgras (1994)
		Moba	gbang	II		Irvine (1961)
		Baatonun	guma	II		Burkill (1985)
	Senufic	Minyanka	seje			Malgras (1994)
		Senufo	siŋe			Malgras (1994)
		Supyire	siŋè			RMB
	Ubangian	Banda	kopu			Sillans (1958)
		Langbase	kepu			Sillans (1958)
		Gbaya	gela			Sillans (1958)
	Kwa	Ewe	vũtí			Rongier (1995)
		Ga	ònyāi	IV		Irvine (1961)
		Abbey	kpè, òbà			Hérault (1983)
		Abidji	lókpa			Hérault (1983)
		Abouré	èñm̃i	IV		Hérault (1983)
		Abron	jínú			Hérault (1983)
		Adyukru	lèkp			Hérault (1983)
		Alladian	ecó tè			Hérault (1983)
		Baule	ŋpè	IV		Hérault (1983)
		Twi	onyāā	IV		Irvine (1961)
		Nzema	èñi	IV		Hérault (1983)
		Brong	ekile			Irvine (1961)
			danta			Irvine (1961)
		Ega	òvè			Hérault (1983)
		Eotile	èpè	IV		Hérault (1983)
		Gonja	kàlèlè			Burkill (1985)
	WBC	Yoruba	egún	II		Abraham (1958)
		also	àràbà			Abraham (1958)
		Yoruba Ifè	vuti		< Ewe?	Burkill (1985)
		Igala	agwu	II		Burkill (1985)
		Isekiri	egungun	II		Burkill (1985)
		Isoko	ahe			Burkill (1985)
		Urhobo	óháhèn			Burkill (1985)
		Igbo	ákpū	II		Burkill (1985)
		Nupe	kúci	II		Burkill (1985)
		Yala	igu	II		Burkill (1985)
	EBC	Kulu	gù-kúúmú	II		RMB
	Plateau	Berom	kugul	II		RMB
		Iten	ekum pl. nikum	II		RMB

Appendix Table 2. (Cont.)

P	Family	Language	attestation	R	Comment	Source
		Cara	fum <i>pl.</i> akum	II		RMB
		Izere	kákúm	II		RMB
		Hyam of Nok	cum	II		RMB
		Ayu	íkúm	II		RMB
		Ningye	kum	II		RMB
		Toro	kumu	II		RMB
		Tasu	kúmú	II		RMB
		Ake	ifɔŋ			RMB
		Eggon	ebzi akum	II		RMB
		Jijili	ukumu	II		RMB
		Jili	kúkúmú	II		RMB
	Cross	Abua	ù-mùùm <i>pl.</i> àrù-			Burkill (1985)
	River	Anaang	úkúm	II		Burkill (1985)
		Ibibio	úkím	II		Burkill (1985)
	Bendi	Bokyi	bokum	II		Burkill (1985)
	Tivoid	Tiv	vàmbè			Burkill (1985)
	Bantu	Duala, Kele	bǔma	II		Burkill (1985)
		Isongo	buma	II		Sillans (1958)
		Mpongwe cluster	oguma	II		Raponda-Walker & Sillans (1961)
		Mpiemo	dumə		< Arabic?	Thornell (2004)
		Fang	oduma			Raponda-Walker & Sillans (1961)
		Vili	mukuma	II		Raponda-Walker & Sillans (1961)
		Eshira	mufuma	II		Raponda-Walker & Sillans (1961)
		Bolia	bo-həngɔ́			Ngila (2000)
		Swahili	mbuyu			Maundu et al. (1999)
		Nyanja	mpilila			FAO (1988)
		Tumbuka	myali			FAO (1988)
		Chewa	usufu		< Swahili?	FAO (1988)
		Nkonde	mutunda			FAO (1988)
NS	Songhay	Songhay	bántàm	I	< Mande	Ducroz & Charles (1978)
		Zarma	fórgò	III?		Ducroz & Charles (1978)
		Dendi	bantan		? < Mandinka	Burkill (1985)
	Saharan	Kanuri	tôm	V		Burkill (1985)
		Ngambay	kura	II?	<i>cf.</i> Songhay?	Le Mbaïndo & Fedry (1979)
	E. Sudanic	Bejondo	kuncə	II?		Adami (1981)
		Anywa	dhégò <i>pl.</i> dhék		? <i>cf.</i> Dinka 'baobab'	Reh (1999)
		Bagirmi	tumu	V	? < Kanuri	De Colombel (1995)
		Gula	rum	V	< Arabic?	Nougayrol (1999)
AA	Semitic	Chad Arabic	rûm	V	? < Hausa	Julien de Pommerol (1999)
	Cushitic	Somali	dum	V	? < Arabic	FAO (1988)
	W. Chadic	Hausa	ríímí <i>pl.</i> ríímààyéé	V		Abraham (1949)
		Guus	mbəràán			Caron (pers. comm.)
		Gashua Bade	limi <i>pl.</i> limaksat	V	< Hausa	Schuh (pers. comm.)
		Duwai	rimi <i>pl.</i> rimi	V	< Hausa	Schuh (pers. comm.)
	C. Chadic	Mora, Muktele etc.	təwme	V	? < Kanuri	De Colombel (1995)
		Uldeme	tiwme		? < Kanuri	Gravina (pers. comm.)
		Bana	tipə			Gravina (pers. comm.)
		Logone Kotoko	lafe			Gravina (pers. comm.)
		Mafa	kwərmbala			De Colombel (1995)
	E. Chadic	Lele	mànyànà			Weibegué & Palayer (1982)

Appendix Table 2. (Cont.)

P	Family	Language	attestation	R	Comment	Source
AN	Malagasy	Sakalava	hazomorengy			Boiteau et al. (1997)
		Sakalava	kaboaka		< French 'kapok'	Boiteau et al. (1997)
		Sakalava	landahazobe			Boiteau et al. (1997)
		Betsimisaraka	laoaty			Boiteau et al. (1997)
		Tankara	pamba, pamba		cf. Amharic [!] 'baobab' but possibly from the island of Pemba	Boiteau et al. (1997)

Appendix Table 3. Indo-Pacific names for *Ceiba pentandra*.

Place/language	Vernacular name	Comment
Lao	ngiou ² ban ²	
Vietnamese	gòn	
American Samoa, Samoa, Niue, Tonga	vavae	
Chuuk	koton	< English
Northern Mariana Islands, Guam	algodon de Manila, atgodon di Manila, algidon, atgidon de anila [i.e. cotton of Manila]	< Spanish
French Polynesia	vavai	
Cook Islands Mangaia, Aitutaki?	vavai mama'u, vavai maori	
Fiji	vauvau ni vavalangi, semar	
Kosrae	kuhtin, cutin	< English
Marshall Islands	koatoa, atagodon, bulik, kotin	< English
Belau	kalngebard, kalngebárd, kerrekar ngebard	
Pohnpei	cottin, koatun, koatoa	< English
Saipan	arughuschel	
Yap	batte ni gan' ken	