

Cultural and Biological Heritage at Risk; The Case of the Rabai Kaya Forests in Coastal Kenya

S. Kibet¹ and C. Nyamweru²

1. Kenya Resource Centre for Indigenous Knowledge, National Museums of Kenya,
P.O. Box 40658-00100, Nairobi, Kenya

E-mail: skibet1@yahoo.com

2. St. Lawrence University, Canton, New York 13617, USA

E-mail: cnyamweru@stlawu.edu

KEYWORDS Kaya. Mijikenda. Sacred Forests. Conservation

ABSTRACT In this paper we give an account of the threats facing the kaya forests, sacred forests of the Rabai people, a sub-group of the Mijikenda ethnic group of coastal Kenya. In this area economic, social, cultural and political forces over the last 150 years have had profound effects on the institutional context of natural resource management. The decrease in economic power of the Rabai, coupled with population increase, has led to increased pressure on all natural resources, including the communally owned kaya forests. At the same time the indigenous institutions responsible for controlling access to the forest resources have been weakened by the impacts of colonial rule, Islam, Christianity and most recently the policies of the independent Kenyan nation state. Despite this, many Mijikenda still have considerable respect for their indigenous value systems, and our paper draws on interviews with community members and local elders to describe some of the beliefs and practices which have ensured the survival of the sacred forests to the present day. We conclude with some recommendations for initiatives that could improve the local economies, strengthen community-based institutions, and enhance the chances of survival of these valuable elements of Kenya's natural and cultural heritage.

BACKGROUND TO THE STUDY: THE MIJIKENDA AND THEIR KAYA FORESTS

The Mijikenda are Bantu speakers who occupy the Kenya coast and hinterland in the four contiguous administrative districts of Malindi, Kilifi, Mombasa and Kwale. They consist of nine sub-groups who share common dialects and very similar culture; the Giriama, Chonyi, Kauma, Kambe, Ribe, Jibana, Rabai, Digo and Duruma. The origin of the Mijikenda is the subject of considerable debate. The account by Thomas Spear (1978), based on oral narratives collected in the 1970s, is of migration from a northern homeland (Singwaya or Shungwaya) said to have been located somewhere to the north of the modern Kenya – Somalia border. Spear's informants told how their ancestors left their original settlements and migrated southwards due to threats from the neighbouring Galla people, drought and famine. They established settlements called *kaya* (*makaya* plural) on hilltops and inside thick forests. Each *kaya* had entrances that were guarded by strong young men, and were further protected by buried charms with the power to exert negative forces on transgressors. Most of the first *makaya* to be established after migration from Singwaya, sometimes referred to as 'primary *kaya*', were named

after the founding group (for example Kaya Giriama and Kaya Chonyi). By the beginning of the 19th century, increases in population, internal disputes and leadership wrangles caused some families to leave these settlements and move first to what have been described as 'secondary *kaya*' and then gradually to the more dispersed settlement pattern which is found in these areas today.

Spear's version of the origin of the Mijikenda and the founding of the *kaya* settlements has been challenged by a number of scholars, including Morton (1972, 1977), Walsh (1992) and Parkin (1991). Recently Helm (2002) suggested two alternative scenarios, neither of which includes the idea of an *en masse* migration of the Mijikenda from Shungwaya in the 16th century AD (Helm, 2002: 47). Helm's scenario one is of the movement southwards from a 'Shungwaya' location of at least some of the antecedents of the northern Mijikenda, who encountered and assimilated with remnant populations left *in situ* from an earlier gradual northwards expansion of Bantu speaking groups. Scenario two argues that the Mijikenda were never in a northern homeland, and that their cultural and historic identity evolved *in situ*, with the incorporation of sedentarised expastoralists. According to this scenario, as population numbers increased, there were

episodes of tension between the pastoralists and the Mijikenda, during which the latter withdrew to the protection of their kaya until relationships could be resumed (ibid. 48)

Whatever version of Mijikenda and kaya history is accepted, the continued cultural and historical importance of the kaya forests to the Mijikenda cannot be denied. Though few if any people reside within the kaya forests today, and most people are buried near their homesteads, several of the kaya forests retain a central clearing and sacred sites where community elders meet and regularly carry out rituals. Cutting of trees and destruction of vegetation are still prohibited, under threat of the imposition of fines or ritual cursing by the supervising elders. Up until very recently, there has been general community acceptance of the authority of these elders and fear of the continued power of the sacred charms buried in the forest.

The kaya forests of coastal Kenya are thus one example of a phenomenon that has been described from many other African countries and from other continents; the sacred forest or sacred grove (Ramakrishnan et al. 1998, Nyamweru 2005, Sheridan and Nyamweru in press). Sacred groves range from areas of several hundred hectares to clusters of trees or even individual trees, and there are many reasons for their sacred status. Some are recognized as the home of a deity, or of ancestors or other benevolent or malevolent spirits. They may have originated as the burial sites of an ancestral or founding figure, or of revered community elders. Some sacred groves are former battle grounds or the sites at which a community leader first established title to the location. Not only do the reasons given for their sacred status differ, but there are many different uses of sacred groves today, including burial grounds, sites of seclusion for initiates, meeting places for secret or semi-secret societies, and community rituals and celebrations. For many sacred groves, their recognition as sacred implies that "the community has established a covenant with deities or other sacred entities to refrain from certain uses of the environment" (Lebbie and Freudenberger 1996: 303), leading to their interest to ecologists and conservation agencies.

THREATS TO THE CONSERVATION OF THE SACRED GROVES; THE CURRENT SITUATION

As population pressure has increased and

land use has intensified, there has been increasing recognition in many regions that sacred groves represent areas of relatively untouched vegetation. In Kenya, the richness of biodiversity in the kaya forests was recognized in the 1980s through the work of ecologists including Ann Robertson and Quentin Luke (Robertson, 1984, 1987, 1993; Robertson and Luke 1993). The kaya forests form part of the once extensive Zanzibar-Inhambane lowland mosaic, known for high species diversity and endemism; as such they are a very important part of Kenya's increasingly threatened natural vegetation communities. However the indigenous institutions that have permitted their survival over the centuries are under increasing threat from a number of external and internal forces. Recent decades have seen an increased demand for forest products, for both building and firewood, as well as for land for farming, settlement and speculation, and all of these factors have greatly increased pressure on the sacred forests (Githitho 2001, Nyamweru 1996).

One key contributing factor is the declining economic situation of the region, beginning as long ago as the late 19th century, when the Mijikenda lost their previously important role as middlemen in the trade between the coast and the hinterland. As a result, they were forced to rely increasingly on their own subsistence crops and livestock. Also in the 19th century, maize replaced sorghum and millet as the staple food crop. More land was needed for maize cultivation to accommodate its shorter rotational interval, and this, paralleled by a rapid increase in human population, increased the rate of destruction of woodland (Spear, 1978). The introduction of the coconut tree (originally from India) to the Kenya coast led to increasing pressure on the indigenous vegetation, first along the south coast among the Digo, and later among the Rabai in the area that is the focus of this study. Other exotic foods such as rice and legumes (grown both as food and cash crops) have also been adopted, leading to further pressure on the indigenous vegetation. The indigenous vegetation of some kaya forests has been completely replaced by annual crops or planted trees such as coconut palms and cashews. Other impacts have come from forest policies, originally of the colonial administration, which aimed at increasing timber production by introducing many exotic tree species into Kenya. At the coast,

large traces of indigenous forest were cleared and planted with exotic species such as *Pinus sp.*

A further threat has come since the mid-1980s, when the income from the two major cash crops (cashews and coconuts) declined significantly. People have been forced to look for alternative sources of livelihood, some of which are environmentally destructive. The Rabai kaya forests are under extreme pressure from sand harvesting and the extraction of building poles, as well as from clearing to create crop lands (Kibet, 2002).

As some of the very few remaining areas of land held under communal ownership, the kaya forests have been very vulnerable to the processes of poorly documented privatization and outright 'land-grabbing' that were such a feature of Kenyan life during the last decades of the 20th century. As more land became privatized, the sacred forests, as remaining areas of community owned land under the care of local county councils, were tempting targets, with or without the connivance of corrupt local officials.

The Mijikenda people keep livestock and the need for grazing land has also had a negative influence on the Rabai kaya forests. Repeated burning of Kaya Mudzimuyya forest and adjacent Kaya Bomu to promote the growth of grasses for grazing has altered forest structure and caused the loss of some plant species. The increase in the area under crops in the surrounding private lands has meant that more and more people take their livestock to graze in the kaya forest, which is communally owned. Burning has also been used to facilitate the hunting of small mammals as well as to create an "open zone" separating the relatively intact forest from adjacent cropland for ease of monitoring wild animals destroying crops. The decline in forest cover leads to wild animals coming to look for their food in the farms, and thus an increase in human-wildlife conflict. As people cultivate close to the edge of the forest, destruction of crops by monkeys and bush pigs increases, giving people reason to 'justify' why the sacred forests should be done away with altogether.

Political changes have occurred, both on the national and regional levels. From the beginning of the 20th century the Mijikenda were incorporated into the colonial state, with wide ranging implications. The imposition of colonial chiefs provided a significant challenge to

indigenous authority systems, including those of the kaya elders. In the indigenous governance system of the Mijikenda, a council of elders (Ngambi) was the most powerful institution that made decisions in every aspect of community life. Their responsibilities included the regulation of natural resource use, the resolution of disputes, and the making of decisions on trade with outsiders. The Ngambi, made up of the senior kaya elders, gradually lost their power as the British government took full control of the country in the early 20th Century. At independence in 1963, the Kenyan government inherited the colonial administration with its highly centralised system, which has continued largely unchanged to date. Local communities have very little power to decide on their own affairs. The role of the council of elders has been reduced to the solving of small village problems relating to marriages, land transfers and other minor civil cases. Even in these, they can enforce their decisions only with support from the central government and its agents (the appointed chiefs and the security forces). For example, the kaya elders' directives in the late 1970s and early 1980s to expel all people squatting in kaya forests only succeeded after government intervention. This was so although the elders had been complaining of this matter as early as the 1950s.

Cultural changes have also been profound. The rapid spread of both Islam and Christianity through madrasas and mission schools respectively has largely replaced the traditional systems that in the past prepared young people for adulthood in the community. Additionally, formal education and the influence of labour migration served still further to introduce new values to the population. Overall these changes have brought with them social dislocation, an erosion of community cohesiveness and a decline in respect for traditional cultural values.

THE PRESENT STUDY: RATIONALE AND METHODOLOGY

Over the last 20 years or so, there has been an increasing recognition of the impact of the forces tending to destruction or degradation of the kaya forests, and of the need to protect the remaining forests from further degradation or destruction. This has led to an alliance between national and international conservation agencies and local community members, in particular the

kaya elders. In 1992 funding from the World Wide Fund for Nature led to the establishment of the Coastal Forest Conservation Unit (CFCU), a unit of the National Museums of Kenya, whose mandate was to work with the Mijikenda on the conservation of the kaya forests (Githitho, 2001; Kibet, 2002; and NMK/CFCU Project progress report, 2000). Overall this project has contributed positively to kaya conservation and has energized the local communities, in particular several of the kaya elders groups. A number of Kenyan and foreign scholars have carried out research in and around the kaya forests and their work has contributed to our increasing understanding of these unique cultural and biological entities. At the same time we have recognized that there is much that we do not know yet, about both culture and biology. In order to design conservation strategies based on indigenous culture, it is essential to understand that culture fully, and this information can only be provided by the community members themselves. In this case much of the vital information is held by the kaya elders, most of whom are indeed old men. Sadly, many of the elders with whom CFCU worked in the early to mid 1990s have already passed away, and there is an urgent need to record this knowledge before all of it is lost.

In this paper we report on our attempt to record some of the important cultural knowledge of one of the Mijikenda communities, the Rabai, focusing on information about ancestral spirituality, local environmental knowledge and traditional practices that may play a part in the conservation of biological diversity. The study was conducted in Rabai location of Kilifi District, an area occupied mostly by the Rabai sub-group of the Mijikenda community. The location has four sacred forests, as well as several sacred groves. Kaya Mudzimwiro is respected as the 'primary kaya' of this community. Others are Kaya Mudzimuvya, Kaya Bendeje, and Kaya Chijembeni (currently highly degraded and overgrown with coconut palms and cashew trees). Rabai is a densely populated area that lies only about 15 kilometers from the major coastal port of Mombasa. It has long been exposed to outside influences including Islam and Christianity. It was at Rabai that the first European mission (the England-based Church Missionary Society) was established in 1844, and a significant proportion of the population today

identify as Christians. This is also the region where a number of freed slaves were settled after the banning of the Indian Ocean slave trade in the mid 19th Century. Thus it is a cultural and religious mixing pot, with followers of Christianity, Islam and the indigenous Mijikenda belief system.

Fieldwork was carried out in and around the four Rabai kaya forests from 1999 to 2002. The primary focus was on the ecology of the forest vegetation, and how composition of the plant communities could be related to the former and current levels of human use of forest resources. Detailed studies of the vegetation were done, which are reported elsewhere (Nyamweru et al., in press). In this paper we describe the results of the interviews and conversations with a wide range of community members in the settlements that surround the Rabai kaya forests. Some of these interviews were carried out in people's homes; we also made visits to the kaya forests with some of the elders to sample and identify vegetation and to locate the cultural and religious sites that lie within the forests.

We randomly interviewed 49 community members of different ages; 20% of them were women for the villages surrounding the five sacred forests of the Rabai people. We also had frequent informal discussions with Kaya elders, who provided more information and also commented on some of the information derived from the other interviews. The interviews were carried out in a mixture of Swahili (the widely used national language of Kenya) and the Rabai language, where necessary with the use of interpreters. We used a semi-structured questionnaire and allowed our informants freedom to divert from the questions as they felt appropriate. In the course of our general conversations and residence in this area, we also gained information about how people saw the influence of the different belief systems on attitudes to kaya forests and kaya forest conservation. Our most important research questions focused on the following:

- o The significance and uses of the kaya forests, both in the past and in the present day.
- o How was access to the kaya forests and use of the forest resources controlled? Who was responsible for this control? Again, we asked our informants to comment on the situation in the past, and that of the present day?
- o To what extent did and do people violate the limitations on use of the kaya forest?

- o What sanctions were and are imposed on violators?

RESULTS

Belief Systems and Attitudes to Kaya Conservation

Our conversations brought out interesting perspectives on the differences between Islam and Christianity, in terms of their relationship with the indigenous belief system. Over several centuries, Islam has co-existed fairly comfortably with the indigenous Mijikenda religion. Islam tends to accept traditional beliefs as long as they do not directly contravene Koranic teachings, and kaya elders can profess the Islamic faith and yet carry out their kaya ceremonial duties. Among the Rabai Muslim converts an individual could serve as spiritual leader of the Kaya council of elders, and at the same time subscribe to the Islamic faith. Furthermore, Islam also has a positive attitude to environmental conservation. According to Kashif (2006) in Islam, conservation of the environment is based on the principle that all creations were made by God to serve a specific purpose. In contrast, Christianity (even in its older, more tolerant form) does not accommodate such an easy co-existence with the traditional religion. This uneasy co-existence of the two faiths has been manifest on several occasions in this community. Staunch Christians do not want to be associated with issues touching on kaya traditions and values. In Nyamweru's earlier interviews with Mijikenda from other communities, she found several people who explicitly denied any knowledge of or participation in kaya rituals with statements such as "Since I am a saved Christian, I have distanced myself from these things, so I cannot exactly tell if they are still done" (1997: 50). Some Christians, especially younger people and those particularly associated with the 'born again' movement or charismatic churches, express strong hostility for the kaya forests and the associated belief systems. They see people associating closely with these traditions as evil (witches) or satanic. The Christian converts interviewed in Rabai showed strong hesitation to comment on kaya issues, or even to have them discussed in their households. A family member of one of our Rabai informants told us "I hope by asking the old man questions on the kaya traditions, does not lead him into sin".

Despite these tensions, it must be recognized that Islam, Christianity and the indigenous religions share respect for the sacredness of certain spatially located phenomena. Mosques, churches and kaya forests are all seen as sacred sites where supernatural forces are present. Further similarity between the most sacred areas of the kaya forests and mosques are reflected in the requirement that one should take off one's shoes before entering. However beyond this basic similarity, we see differences in attitudes to specific natural phenomena. One of these is the attitude to snakes; according to the Rabai traditional belief system, spirits benevolent to humanity are manifest on earth in the form of snakes that are said to warn the community of imminent disasters. This is particularly true of very large snakes such as pythons, which are therefore protected traditionally. Furthermore, these snakes were believed to dwell in large trees or thick forests, which were not to be felled. This argument is perhaps one of the reasons for protecting the kaya forests from destruction. There is a big contrast here with the Christian aversion for snakes as the source of humanity's disaster in the Garden of Eden and the ultimate curse (Holy Bible, Gen. 3:1-15).

Use of Kaya Forest Resources

According to the indigenous belief system, several plant species are protected from being used or destroyed. These included the baobab tree (mbuyu in the Rabai language; latin name *Adansonia digitata*); the tree known to the Rabai as Mware (*Bombax rhodognaphalon*), and the tree known as Mvule (*Milicia excelsa*) (Nyamweru et al., in press). Other tree species had negative connotations which discouraged or prohibited people from using them. These included Mfumulwa ndolwe (*Canthium Kilifiensis*), Mutsonga mahana (*Brackenridgea zanguebaricae*), and Mbavumbavu (*Uvaria acuminata*). Though Christians recognize the importance of certain plant species (palms on Palm Sunday, conifers at Christmas time), the Christian bible does not contain instructions to specifically protect any particular wild plants. Our Rabai informants admitted freely that these days, both the protected and the culturally prohibited species are being utilized freely. Some of the 'sacred trees' (in particular Mware) are sold to non-Mijikenda who come in to cut them down in

the kaya forests and nearby forest relics. This may reflect a lingering resistance among the Mijikenda to the act of cutting these trees themselves, though they are prepared to sell them to outsiders to do the cutting.

Nyamweru found that the younger people (in particular young women) tended to be very ignorant about the significance of the kaya forests (Nyamweru 1997: 45), and our interviews at Rabai showed the same situation. Most of the people who are caught violating kaya regulations are young people less than 35 years old (of course the majority of the Kenyan population is less than 35 years old!). Young women are primarily responsible for providing fire wood for the homesteads, and women also play a major role in agriculture, in particular in the growing of food crops. The need to 'keep the home fires burning' and to have something in the cooking pot at the end of the day drives them to seek for short-term survival at the expense of long-term sustainability (Nyamweru 2003, Horowitz 1998). Sand mining is another serious threat to these kaya forests, and this provides a ready source of income for otherwise unemployed or under employed young men in these communities.

Economic forces have also driven people to other actions damaging to the kaya forests. One example is the theft of the *vigango* or traditional wooden grave markers, which has been widely reported from many parts of Kilifi District. These carved slabs of wood have found a ready market among curio dealers who sell them at huge profits to North American and European collectors and galleries. As traditional beliefs have become weakened, people have felt emboldened to steal these markers and sell them to the dealers (Tengeza 2000). In Rabai, the situation was exacerbated in the early 1980s, when some people were so enraged by the kaya elders' insistence that they should stop cultivation and move out of the kaya forests, that they uprooted the *vigango* from the Kaya Mudzimuvya grave yard. This was a deliberate act of desecration of the sacred forests and can also be interpreted as a way to disapprove the widely held belief that breaking taboos would lead to negative consequences for an individual, his family or even the wider community.

In the past, the Rabai people made use of a wide range of timber and non-timber plant products in their daily lives, for items ranging from building poles to drums, wooden spoons

and woven mats and baskets. Cultural changes have contributed to adoption of new technologies and lifestyles. Traditional items have been replaced by imported or synthetic substitutes. For example, cheap plastic and metallic plates and spoons have replaced the traditional wooden spoons and bowls. Modern drums and chairs are also available in the markets for those interested in them. Plastic mats are also replacing the hand woven mats. Some of these traditional items played a significant role in the lives of the Rabai community in the past and therefore trees used to make them enjoyed some form of protection. One example is *Mwanza*, the traditional drum that was kept in the kaya forest and used in the past to pass different messages to the community. *Mwanza* was made from special trees with strong wood and of large diameter, so trees had to be preserved for this purpose. We were informed that this drum was last used in Rabai more than forty years ago, and the skill for making and playing it is now virtually lost. The same is true of the ability to make smaller items such as spoons and bowls.

Although it might be assumed that the replacement of wooden items by metal or synthetic items should reduce the demand for timber from the kaya forests, the reality is that the demand has shifted from smaller items to larger ones such as building poles, planks and fire wood. For instance the old architectural grass-thatched huts, known to last for up to 30 years, have now been replaced by the angular Swahili type that is widespread today. These houses are estimated to require renovation after every three years, thus increasing the demand for building poles. The increasing population and the high cost of purchased building materials have resulted in an accelerated extraction rate of building poles from the sacred forests. Faced with these powerful economic forces, the ability of the indigenous institutions to limit the extraction of kaya forest resources is very limited (Kibet, 2002; Pakia, 2000; Nyamweru et al., in press).

Control on the Use of Kaya Forest Resources, in the Past and Today

Our informants had much to say about the weakening of the indigenous governance systems. In the past, fear of breaking taboos played a significant role in people's compliance with the rules. The community believed that

transgressions of taboos might result in sickness, madness or birth of handicapped children by the offending party. The decline in respect for traditions and belief systems has meant that sacred forests are increasingly being destroyed. The respect held by the kaya elders has been eroded by their perceived inability to warn community members of impending calamities such as drought and disease outbreaks, unlike people's image of their past ability to do this effectively. Open conflicts between individual elders or cliques among the leadership, and the admission into their ranks of unqualified and poorly respected has contributed further to weaken their authority of the Kaya elders. Political rivalries on the regional or national level have resulted in the involvement of the kaya elders, and have been given considerable publicity in the Kenyan press. Examples are the stories by Mwangi and Ndurya (2006), Ngumbao (2006), Ndurya (2006) and Kwena (2006). Though the illiterate older villagers may not be aware of the press coverage, younger people certainly are, and none of this has a positive impact on the image of the elders as revered community leaders.

CONCLUSION AND RECOMMENDATIONS

Despite the fact that many of our informants expressed respect for the kaya forests and continued belief in the indigenous religion, the fact remains that today almost 50% of the original area of the Rabai kaya forests has been cleared for cultivation, settlement and sand harvesting, and people continue to extract forest products from them on an unsustainable level. Economic forces have a powerful role to play in people's use of natural resources, whatever their original cultural beliefs may be (Nyamweru 2003). Over recent decades, the weakening of some central tenets of the Rabai traditional belief systems has had serious implications for the survival of biodiversity in this area. Solutions are not easily arrived at, and cannot be proposed or implemented without a consideration of the interlocking factors that contribute to the present status of the kaya forests and the communities that have maintained them for centuries. Bearing in mind this proviso, the following suggestions for approaches to the problem of kaya conservation are made.

There is a need to educate all community members (both young and old) on the changing

roles of forests and their continuing importance. It is also important to form broad based conservation and development groups that include young and old, Christians, Muslims and traditionalists, men and women, rural people as well as urbanized individuals who still have roots in the community elite. Such bodies should be recognized by the central government and given some powers to regulate the use of natural resources in the area under their jurisdiction. They would gain much from the support of religious organisations (Christian or Islamic) who can influence their followers positively to work towards the conservation of biological diversity, and efforts need to be made to tap these resources.

Reduction of rural poverty is essential if natural resources are to be conserved. Since agriculture is the main economic activity in this area, it is important to make it more productive and capable of yielding both household food needs and income. A wide range of strategies to develop sustainable farming systems are already available and have been tested in other parts of Kenya and the tropics, including agro-forestry, soil conservation measures and the use of organic fertilizers. Agro-forestry would be one way to meet part of the need for forest resources, in particular fuel wood. Reduction of demand through the use of fuel efficient stoves would also be useful; the majority of households in this region still cook on the wasteful open three-stone hearth, although cheap fuel efficient stoves are widely available in Kenya. Marketing of farm produce has long been a major hindrance to rural development in Kenya, in particular along the coast, and this also needs attention.

Another potential source of income is tourism. Rabai lies within less than 50 kilometres of major Kenya tourist resorts along the north coast and in Mombasa, and many community members have been employed in tourism related businesses. However most Mijikenda are limited to the lowest paying jobs in these businesses; gardeners, security guards and housekeepers. Others may sell curios or act as 'beach operators' and 'traditional dancers' in the resort areas. None of these jobs are well paid, secure or indeed conducive to personal dignity. Our recommendation would be for the development of community controlled tourist operations that make use of the ecological and cultural richness of the area. There is already a precedent on the

south coast at Diani, where the Kaya Kinondo ecotourism project has been in operation since 2001 (Mwafujo 2006, Lonely Planet 2006: 173). At Rabai the close proximity of the kaya forests, representing the indigenous belief system, to the original mid-19th century church and mission outpost of the CMS would have powerful appeal, if appropriately developed and marketed. The natural landscape of forested ridges overlooking the coastal plain also has authentic aesthetic value that will interest naturalists and historians alike.

ACKNOWLEDGEMENTS

Kibet wishes to acknowledge the People and Plants Initiative of UNESCO for financial support for the research; Nyamweru acknowledges St. Lawrence University for their support. Kibet also recognizes the help of Dr. Robert Hoft, Dr. E.J. Mrabu and Dr. E. Omino in giving him professional guidance during his fieldwork. We extend many thanks to the Rabai kaya elders, community kaya guards and the community at large for their support and sharing their knowledge. Both of us have benefited greatly from the logistical support of the Coastal Forest Conservation Unit and its personnel throughout our research on the kaya forests.

REFERENCES

- Githitho, A.N.: Traditional conservation and management practices in the sacred Mijikenda Kaya forests of coastal Kenya. In: *Research Project on Traditional Conservation Practices in Africa, Conservation of Immoveable heritage in Sub Sahara Africa* Africa -2009 (2001)
- Helm, R.: *Conflicting Histories; The Archaeology of the Iron Working, Farming Communities in the Central And Southern Coast Region of Kenya*. Ph.D Dissertation (unpublished). Bristol University, Archaeology Department, UK (2002).
- Holy Bible: *Genesis 3:1-15* New International Version. International Bible Society, Colorado USA (2003).
- Horowitz, L.S.: Integrating Indigenous Resource Management with Wildlife Conservation: A Case Study of Batang Ai National Park, Sarawak, Malaysia. *Human Ecology*, **26**: 371-401 (1998)
- Kashif, M. S.: Involving religious leaders in conservation education in the western Karakorum, Pakistan. *Mountain Research and Development*, **26**: 319-322 (2006)
- Kibet, S.: *Human Disturbances and Its Impact on Vegetation, Structure, Composition and Regeneration of Kenya Coastal Forests. A case study of Kaya Mudzimunya forest*. MSc Thesis (unpublished). Jomo Kenyatta University of Agriculture and Technology, Kenya (2002).
- Kwena, E.: Unholy wars erupted at the shrines. *Daily Nation*. Nairobi, April, 9, 2006 p.7 (2006)
- Lebbie, A.R. and Freudenberger, M. S.: Sacred groves in Africa: forest patches in transition. Chapter 15. In: *Forest Patches in Tropical Landscapes*. J. Schelhas and R. Greenberg (Eds.). Island Press, Washington (1996).
- Lonely Planet: *Kenya*. Lonely Planet Publications, Footscray, Victoria, Australia (2006)
- Mwafujo, H. The success story of Kaya Kinondo ecotourism project. *Kenya Association of Forest Users News Update*, Issue No. 6. (June 2006)
- Morton, R.F.: The Shungwaya myth of Mijikenda origins: a problem of later nineteenth century coast history. *International Journal of African Historical Studies*, **5**: 397-343 (1972).
- Morton, R.F.: New evidence regarding the Shungwaya myth of Mijikenda origins. *International Journal of African Historical Studies*, **10**: 628-643 (1977).
- Mwangi, M. and Ndurya, M.: Battle over sacred Island. *Daily Nation*, Nairobi, December, 6, 2006 p.36 (2006)
- National Museums of Kenya/Coastal Forests Conservation Unit, *Annual Project Progress Report*. NMK/CFCU reports, Nairobi Kenya (2000).
- Ndurya, M.: Demo held to protect sacred forest. *Daily Nation*, Nairobi, April, 16, p.3 (2006)
- Ngumbao, K.: Kaya elders' row blamed on politics. *Daily Nation*, Nairobi, April, 4, 2006, p.5 (2006).
- Nyamweru, C.: Sacred Groves Threatened by Development. *Cultural Survival Quarterly*, **20**: 19-21 (1996).
- Nyamweru, C.: *Report on Socio-Cultural Research Carried out in Kwale and Kilifi Districts of Kenya, March to May 1997*. Unpublished consultancy report for Coastal Forest Conservation Unit (1997).
- Nyamweru, C.: Women and sacred groves in coastal Kenya; a contribution to the ecofeminist debate. pp. 41 – 56. In: *Ecofeminism and Globalization*. H. Eaton and L.A. Lorentzen (Eds.). Rowman and Littlefield, Lanham MD (2003).
- Nyamweru, C.: Sacred Groves of Africa. Pp. 1451-1456. In: *Encyclopedia of Religion and Nature*. Bron Taylor and J. Kaplan (Eds.). Continuum, London (2005).
- Nyamweru, C., Kibet, S., Pakia, M. and Cooke, J.: The kaya forests of coastal Kenya: 'remnant patches' or dynamic entities? Chapter 4. In: *African Sacred Groves: Ecological Dynamics and Social Change*. M. Sheridan and C. Nyamweru (Eds.) James Currey and Ohio University Press, Oxford and Athens OH: to be published in September 2007.
- Pakia, M.: *Plant Ecology and Ethnobotany of two sacred forests (Kayas) of Kenyan Coast*. MSc Dissertation (unpublished). School of Life and Environmental Science, University of Natal, South Africa (2000).
- Parkin, D. J.: *Sacred Void: Spatial Images of Work and Ritual among the Giriama of Kenya*. Cambridge University Press, Cambridge (1991).
- Ramakrishnan, P.S., Saxena, K.G. and Chandrashekhara, U.M.: *Conserving the Sacred for Biodiversity Management*. Science Publishers, Enfield NH (1998).
- Robertson, S.A.: The status of kaya forests. pp. 150 – 164 In: *Endangered Resources for Development*;

- Proceedings of a Workshop on the Status and Options for Management of Plant Communities in Kenya.* National Museums of Kenya, Nairobi (1984).
- Robertson, S.A.: *Preliminary Floristic Survey Of Kaya Forests of Coastal Kenya.* Unpublished report, National Museums of Kenya and WWF, Nairobi Kenya (1987).
- Robertson, S.A.: *The Sacred Kaya Forests of the Kenya Coast.* Unpublished ms. 6 pp. (1993).
- Robertson, S.A. and Luke, W.R.Q.: *Kenya Coastal Forests; the Report of the NMK/WWF Coast Forest Survey WWF Project 3256.* World Wide Fund for Nature, Nairobi (1993).
- Sheridan, M. and Nyamweru, C. (Eds.): *African Sacred Groves: Ecological Dynamics and Social Change.* James Currey and Ohio University Press, Oxford and Athens OH: to be published in September 2007.
- Spear, T.: *The Kaya Complex: A History of the Mijikenda Peoples of the Kenya Coast to 1900.* Kenya Literature Bureau, Nairobi (1978).
- Tengeza, A.H. The Mijikenda grave markers: report of a study on timber and live tree grave markers and associated traditions in kaya forests and adjacent areas of Kilifi District.. Pp. 174 – 188, In: *Links between Cultures and Biodiversity.* Xu Jianchu (Editor in Chief). Yunnan Science and Technology Press, Yunnan (2000).
- Walsh, M.: Mijikenda Origins, *Transafrican Journal of History*, **21**: 1-18 (1992).