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and Biodiversity
Conservation: Sacred Groves
in Ghana**

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Summary

Local cosmologies and traditional perceptions of the natural environment, especially forests, have been a major influence in the management of the natural resources and biodiversity amongst rural communities in the transitional zone of Ghana. Sacred groves, which are typical outputs of traditional conservation practices, derive from indigenous religious beliefs and perceptions of forest. Sacred groves are believed to be the abode of local gods, ancestral spirits and other super natural beings. These beliefs and perceptions have in the past strongly supported the conservation of biodiversity. However, changes in local cosmologies threaten the protection of rare species, habitats and ecological processes. Data from the study confirm evidence from several studies in Ghana and elsewhere in West Africa that the tremendous ecological, social, institutional, religious and economic changes in communities that have protected sacred groves threaten the survival of these cultural artefacts. The paper demonstrates that in contemporary natural resources management, the sacred grove model may still be used as a means of restoring and protecting landscapes in indigenous communities. Even in communities where population explosion and economic pressures have reached thresholds that undermine the natural landscape, the model may still be useful to keep pockets of forests within the landscape.

Keywords: Sacred Grove, Cultural Artefact, Communal Resource, Degradation, Sustainability and Biodiversity

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TRADITIONAL REPRESENTATIONS OF THE NATURAL ENVIRONMENT AND BIODIVERSITY CONSERVATION: SACRED GROVES IN GHANA.

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Abstract

Local cosmologies and traditional perceptions of the natural environment, especially forests, have been a major influence in the management of the natural resources and biodiversity amongst rural communities in the transitional zone of Ghana. Sacred groves, which are typical outputs of traditional conservation practices, derive from indigenous religious beliefs and perceptions of forest. Sacred groves are believed to be the abode of local gods, ancestral spirits and other super natural beings. These beliefs and perceptions have in the past strongly supported the conservation of biodiversity. However, changes in local cosmologies threaten the protection of rare species, habitats and ecological processes. Data from the study confirm evidence from several studies in Ghana and elsewhere in West Africa that the tremendous ecological, social, institutional, religious and economic changes in communities that have protected sacred groves threaten the survival of these cultural artefacts.

The paper demonstrates that in contemporary natural resources management, the sacred grove model may still be used as a means of restoring and protecting landscapes in indigenous communities. Even in communities where population explosion and economic pressures have reached thresholds that undermine the natural landscape, the model may still be useful to keep pockets of forests within the landscape.

Key Words: Sacred grove, cultural artefact, communal resource, degradation, sustainability and biodiversity

INTRODUCTION

What are usually referred to as sacred groves, which are usually communal resource property (Bromley 1992; Lebbie and Freudenberger 1996) and normally forest patches or islands (Fairhead and Leach 1998), are expressions of traditional natural resource management (Subash Chandran and Donald Hughes 2000). In this paper, it will be shown that amongst the Akans in the transitional agroecological zone of Ghana, sacred groves are based on representations of the natural environment and on a belief in the *tumi* suffused in nature. It is argued that the origin and nature of sacred groves (or sacred forests) and their management are based mainly on indigenous religious beliefs and cultural practices (Dorm Adzorbu *et al.* 1991; Ntiamoa-Baidu 1995; Lebbie and Freudenberger 1996). It will be emphasised that sacred groves derive from the desire of local people to live in harmony with numerous spirits that are believed to be associated with the natural environment, especially forest (Hagan 1998; Grim 2000). It will be shown that they, like other communal resources, depend on local village institutions and their authority to ensure the conservation of nature (Bromley 1992).

MATERIALS AND METHODS

The paper is based on an anthropological fieldwork conducted by the authors in four purposefully selected communities in the transitional agro-ecological zone of Ghana to study the spirituality of forests and conservation between April 1999 and March 2000, and a follow-up study in selected communities between 2006 and 2008 to ascertain the status of the sacred sites and to track changes in local people's perceptions about forests. The communities studied were Bofie and Nchiraa in the Wenchi District; and Buabeng-Fiema and Dotabaa in the Nkoranza District, all in the Brong Ahafo region of Ghana (Figure1). Two principal anthropological methods, participant observation and key-informant interviews (Levine 1973), were used to collect qualitative data. Other methods comprised participatory natural resources and social mapping, transect walks and semi-structured interviews. A household survey, using structured interviews was employed to collect quantitative data.

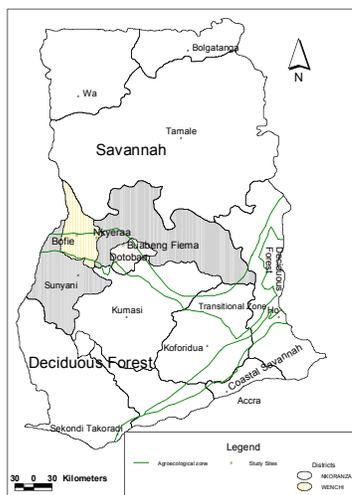


Figure 1. Map of Ghana showing location of research communities

RESULTS AND DISCUSSION

LOCAL CONCEPTIONS OF 'SACRED' AND 'SACRED GROVES'

In the study communities, as is common amongst the Akans (Rattray 1923; Ntiamao- Baidu 1995), *nsamanpow* (burial grounds), *mpaninpow* (ancestral burial grounds) and *amanfooso* (abandoned settlements or a place where ancestors were supposed to have settled or believed to have emerged from the ground) are believed to contain *sunsum* (spirits) of the ancestors or the dead. Similarly, *abosompow/asoneyeso* or designated areas of *abosom* (local gods or deities) serve as abodes of the spirits of the gods or deities. The term used for such sites here, as in other parts of Ghana, is usually 'sacred groves'. For example, the Asubengya people in Ashanti regard the Asantemanso forest as being where the eight clans of the Asante people emerged from the ground, Rattray, as early as 1923, referred to the site as a 'sacred grove' (1923, p. 122).

Local descriptions of 'sacred groves' gathered during the fieldwork include key words such as *ehohu* (frightening); *ehoyedinn* (quiet and serene); *ehoyesum* (it is a dark place) *empe efi* (such areas should not be profaned) *tumi woho* (possesses supernatural powers); and *nnipahunu biara nkoho* (those without special powers or unauthorised people may go there at their own peril). It was also emphasised that such areas are used for *mmusuyi* (rituals), *apaye* (prayers and libation pouring) to ancestors, gods or deities and for other religious purposes. From this milieu of key words, it is no surprise that early anthropologists who studied the Akans (especially the Asantes) qualified such areas, usually forests surrounding the village or abutting it, with the English word 'sacred'. This underscored the religious practices and reverence that local people associated with such areas. For example, in relation to the Asantemanso 'sacred grove' mentioned above, Rattray (1923) indicates:

"To spill human blood is absolutely taboo at Asantemanso. Moreover, every woman in the little village where the Queen Mother and the custodian of the grove reside, as soon as the menstrual period is about to begin, must leave the village and go and live for a week at Asubengya or some other neighbouring village. Neither is one allowed to die here...." (p. 131).

Similarly, what is contextualised in English as 'sacred' in the study communities is strongly underpinned by avoidance of *efi* which, referred to by Rattray (1923), may include menstruating women, corpses or the spilling of human blood. Most importantly, as indicated above, it presupposes the presence of a high level of *tumi* which may derive from ancestral spirits, gods, deities, superhumans and legendary beings such as *mmoatia* and *sasabonsam*. These could bring benefits or a curse to the community, depending on the relationship the community maintains with them.

In the local context, the word 'sacred', as used in English, may not be captured in a single equivalent word but in several key words and interpretations as noted elsewhere (Sponsel 1998). However, the use of the word 'sacred' to refer to objects, places, institutions and individuals implies some extraordinary attributes which stimulate feelings of power, mystery, awe, transcendence, peace and healing (Pobee 1991; Hagan 1998). For instance, local people may be said to regard the institution of chieftaincy as 'sacred' (Busia 1951). This derives mainly from the association of the institution with the gods and spirits of the land, especially ancestral spirits. As a result of the 'sacredness' of the institution, chiefs are respected, trusted and believed to dispense justice impartially, and are also seen as living above reproach. Thus,

in the local context, 'sacred' may connote integrity, which challenges human beings to the pursuit or development of perfection (Pobee 1991).

Perhaps most importantly is the perception of 'sacred' as a universal attribute of nature (Hagan 1998). Local people experience the 'sacred' nature of forests, rivers, streams and animals through the views they have of them as centres of power, sources of blessings and abodes of divine ancestors and the dead (Ola-Adams 1998). As summarised by Hagan (1998):

"Most ethnic groups in Ghana that believe in a common essence in nature postulate one or several of these statements: all things are gods (*bosom*); all things possess spirits (*sunsum*); all things are medicines (*aduro*); and everything has power (*tumi*). These postulations made humans respect nature as sacred. Thus in most places there were laws forbidding sexual intercourse in the bush; laws forbidding defecating and urinating in the strange places which may be sacred; and laws forbidding access to places considered sacred" (p. 27).

In the study communities, access to 'sacred' places is, therefore, restricted and not every member of the community can enter such places. Usually, it is the elders of the village and the priests/priestesses who enter on ceremonial occasions to perform rituals and pray to the gods and spirits (e.g. ancestral spirits) in the place. As a consequence of the potential danger to individuals or the defilement of the place, local elders ensured that entry was controlled. For example, most local elders consider that the entry of menstruating women to a sacred grove, as indicated by Rattray (1923) in the case of the Asubengya people, is a defilement of the place, because during that period a woman is believed to possess *tumi* which is incompatible with that of the spirits and gods that dwell in the place (Dotobaahene, Chief of Dotobaa *pers. comm.*). Therefore, her presence may endanger both her life and the lives of those in her company. Generally, it is believed that unauthorised entry may disturb the gods and spirits and may attract retribution (Adarkwa-Dadzie 1998). Thus, entry by unauthorised members of the community was considered dangerous. Perhaps to reinforce the latter, i.e. protection of the 'sacred' or sacred places from unauthorised entry, such places are not to be disturbed. This is also related to the perception that the gods and the spirits may be undertaking beneficial duties to society (Adomako *et al.* 1998). This view is captured in the local association of 'sacred' with quietness and fear/reverence (*suro*) as in the following:

"If one enters a house and in the middle of the house he calls out to the people in the house and no one responds, suddenly the person is gripped with some kind of fear especially if the house is quiet. But one cannot tell exactly what he is afraid of" (Kwaku Akowuah *pers. comm.*).

Thus, in the local context, 'sacred' is strongly underpinned by fear and awesome reverence (*suro*) of the gods and spirits associated with such places, and helps to sustain them (Castro 1990; Dorm Adzorbu *et al.* 1991; Ntiama-Baidu 1995; Adomako *et al.* 1998). These conceptions were in the past strongly underlined by the belief in the *tumi* of these places. But, in the study area as elsewhere in Ghana (Ntiama-Baidu 1995; Abayie Boateng 1998; Cudjoe Voado 1998), local perceptions of the fear of and reverence for the *tumi* associated with the 'sacred' and with sacred places (including sacred groves) have eroded.

'TUMI' AND THE SACRED GROVES IN THE STUDY COMMUNITIES

The origins of sacred groves in the study communities and summaries of the interpretations of *tumi* associated with them are shown in Table 1.

The association of these areas with *tumi* is similar to that in other parts of Ghana (Dorm Adzorbu *et al.* 1991; Falconer 1992; Gyasi 1996) and across West Africa (Lebbie and Freudenberg 1996; Fairhead and Leach 1998).

Recounting the oral history of the sacred groves elicits strongly nostalgic mythical, spiritual and ecological memories of the past in the study communities, especially amongst the elderly (Lebbie and Freudenberg 1996; Fairhead and Leach 1997; Seeland 1997; Gadgil 1998; Sponsel 1998; Subash Chandran and Donald Hughes 2000). They are represented as part of the myth of origin of the settlements. Their history also raises questions of the misrepresentation of such sites by colonial foresters and ecologists who, until recently, regarded sacred groves as generally comprising remnants of pristine forests (Fairhead and Leach 1995, 1996 and 1998a). Local memories do not only emphasise sacred groves as being 'cultural artefacts' of the shaping of the landscape by local people (Fairhead and Leach 1997), but they also underlie concerns expressed about change and the sustainability of sacred groves. In fact, change and the sustainability of sacred groves have become important issues for research, which emphasises changes in religion, although other factors (economic and biophysical) are also important (Lebbie and Freudenberg 1996; Gadgil 1998; Subash Chandran and Donald Hughes 2000).

In the context of change and sustainability, it must be mentioned here that all the study communities have sacred groves or remnants of such sites. However, only Bofie and Buabeng Fiema have been able to preserve their sacred groves. In the other two communities sacred groves have been decimated or severely degraded (Table 1). Even in Bofie and Buabeng Fiema, as observed in other parts of Ghana (Dorm Adzorbu *et al.* 1991; Gyasi 1997) and West Africa (Lebbie and Freudenberg 1996; Decher 1997), the sites are threatened. This is due partly to changing local attitudes towards traditional representations of the natural environment.

In the rest of the paper, observations are presented on the sacred sites in the four study communities to show the complex memories and the intrinsic cultural values local people attach to sacred groves. Also, because sacred groves in West Africa are regarded as cultural artefacts (i.e. anthropogenic) and not pristine forests (Leach and Fairhead 1995; Fairhead and Leach 1998), local historical perspectives on the evolution of the sites have been highlighted. Finally, spiritual perceptions of these areas as they are enshrined in local concepts of the natural environment and how changes in perceptions have affected the management of these sites have also been emphasised.

Table 1. Sacred groves in the study communities and their *tumi*.

| Community | Sacred site (s) | State of site | Associated spirits | | | <i>Tumi</i> associated with grove | | | |
|---------------|--|--|--------------------|-----------|---------------|-----------------------------------|------------|----------|------|
| | | | Gods | Ancestral | Myths/legends | Healing/ Cleansing | Protective | Sanction | Rain |
| Dotobaa | Asuonyima | Reduced/ degraded | X | | X | X | X | X | |
| | Obokese | Degraded | X | | X | | | X | X |
| Bofie | Jinatra | Degraded | | | X | | | X | |
| | Ghonno | Preserved, but isolated encroached on for farming | X | X | | X | X | X | X |
| Nchiraa | Brabo | Reduced in size/ degraded | X | | | X | X | | |
| | Ntwokom | Decimated | | | X | | | | X |
| | Boten | Decimated | X | | X | X | X | X | |
| | Worobo | Reduced in size/degraded | | X | X | X | X | X | |
| | Abofiemu | Decimated | X | | | X | X | | |
| Buabeng Fiema | Daworo (Buabeng Fiema Monkey Sanctuary) | Preserved, but encroached on at the periphery for farming | X | X | | X | X | X | |

Asuonyima sacred grove and the spiritual pond at Dotobaa

The sacred grove in Dotobaa is believed to be the abode of the *omanbosom* (state god) Asuonyima, which is represented by a 'sacred' pond (*tadie*) about five metres in diameter and probably not exceeding eight metres deep. However, local people believe that the depth is limitless and that it can submerge any living creature. It is believed to have swallowed an elephant which used to wade through the pond. Therefore, its numerous local titles include '*atakyesuo omene asono*', literally 'the muddy pond that swallows elephants'. Local people insist that the tusk of the elephant can be seen in the pond.

The grove was, in the past, part of a vast forest which covered several hundreds of hectares, but has been reduced in size over the years to about 2.4 hectares within close proximity of the pond (Nana Dotobaahene *pers. comm.*). Ancestors (the first settlers) of the villagers are believed to have entered into a spiritual pact with Asuonyima for protection, after oracles revealed the pond to be *asubosom* (a river deity). According to the local chief, their ancestors marvelled at the perennial nature of the pond during extreme drought, when all large rivers in the area dried up. He emphasised that "the oracle also revealed to our ancestors that the *sunsum* (spirit) of the pond did not like people to live close by because of *efi*, so they moved to our present settlement".

According to the chief, *efi* is all forms of waste and filth associated with human habitation, including those with a spiritual connotation such as menstruating women and adulterous people. The pact enjoined local people to comply with the demand that the pond and its environs be avoided (except by village elders and 'fetish' priests), especially for farming, but established that for the regular performance of rituals and conciliation, protection and prosperity would be provided by the deity. For example, local folklore indicates that in the past gold, considered to have a lot of *tumi* and could be given by deities to their faithful followers, could be collected from the pond on special occasions. Consequently, the pond was named *Asuonyima*, literally 'the water (or pond) that gives' and *▷deefo▷* (the generous one).

Local memories also indicate that, in the past, the environs of the sacred pond were a vast, dense and dark forest, which was inhabited by *mmoatia* (dwarfs) and other legendary beings, elephants, lions and other wild animals that made it a frightening place to enter. Whistling was even forbidden in the place. It was only village elders who went into the forest to pray and make offerings to Asuonyima. The fear and the reverence (*suro*) for the place in the past is captured in the words of an elderly informant:

"The forest was feared and revered by all in the past. Nobody farmed, collected firewood or hunted in it. Those who did were often made to lose their direction by *mmoatia* and roamed in the forest for hours until Asuonyima set them free after he was satisfied that a lesson has been learnt" (Nana Owusu, Linguist of the Chief of Dotobaa *pers. comm.*).

Sundays, which are *dab▷ne* (taboo days) for Asuonyima, were particularly revered. The fetching of water from the pond or other streams in the forest, and farming in lands adjacent to the forest was forbidden. Informants emphasised that, in the past, those who disregarded these restrictions could suffer various forms of retribution from Asuonyima and the *mmotia*. For example, anybody who whistled in the forest would immediately have his or her mouth twisted. Also, wild bees, which were believed to be associated with the spirits in the forest, would attack immediately anybody who entered the forest on *dab▷ne*. In 1987, a logger who clandestinely

went to log in the sacred grove on Sunday was brutally "assaulted" by the bees and chased out of the forest. Surprisingly, he could not find his axe which he had left close by. Fearing further retribution on the part of the spirits, he reported the episode to the village chief and elders who conciliated the spirits and Asuonyima. Commenting on the incident, an informant indicated:

"But now these powers have waned even though people still fear and revere Asuonyima. Disbelief by the people has eroded the *tumi* in the forest and subsequently the *tumi* of Asuonyima has been affected" (Nana Owusu, Linguist of the Chief of Dotobaa *pers. comm.*).

The degradation of the sacred grove, though believed to have been started by bush fires, has accelerated due to opportunistic farming. According to informants, fires have caused the forest to lose its canopy and darkness (*esum*), which in the Akan cosmology engenders *suro* (fear/reverence) and enhances the spirituality of forest (McLeod 1981; McCaskie 1995). Thus, increased human activities in the forest were facilitated, resulting in a vicious cycle of bush fires and the further expansion of farming and other human activities. Also, as a result of the intensification and commercialisation of agriculture in the area, the natural regenerative capacity of the forest was reduced drastically. Much of the forest has been cleared except for a small patch containing the shrine (*asoneyeso*) of Asuonyima and the sacred pond.

Despite the changes in the biophysical structure of the sacred grove, Asuonyima is still revered by local people. It is still considered to have some potency even though its *tumi* (Table 1) has waned. For example, water from the pond is considered to have some cleansing powers and the potency to protect believers against evil forces. Also, by dropping an egg in the pond (or by making an offering) an individual can pray to Asuonyima and make a request for protection and material prosperity. If the egg is submerged, it is considered that Asuonyima has accepted the prayers and the request will be fulfilled. On the other hand, if the egg floats it implies that the god has not accepted the prayer and the request will not be complied with. The implication of the latter is that the individual making the request might have committed some offence and needs to confess his/her sins to *Onyame* and Asuonyima, followed by a sacrifice for conciliation. The latter may involve an offering of a sheep and a bottle of alcohol (*schnapps*) for rituals. Asuonyima is consulted regularly by various people in the settlement and from outside (Plate 1).



Plate 1. Elders praying at the Asuonyima sacred pond.

Boten, Worobo and other sacred groves of Nchiraa

Amongst the four study communities, Nchiraa has the largest number of shrines (*asoneyeso*) and degraded sacred groves. This is perhaps due to the existence of countless gods (*abosom*) in the community, since each of the deities had a shrine, usually in a patch of forest. The landscape of the community became dotted with such sites, where human activity was reduced because of fear of encountering spirits or retribution from them. Thus, in the past, Nchiraa was believed to be home to several powerful deities. This generated the symbolic oath "Ninety-nine gods of Nchiraa", by which adherents of traditional religion within the community and beyond could swear to defend their innocence. It was a powerful oath (*ntam*), which was accepted amongst traditional religious believers as a declaration of the truth and exoneration from false accusations or crimes.

Most of the sacred groves in Nchiraa are severely degraded. For example, the sacred grove of the *omanbosom*, Boten, has virtually no remaining large trees. The Boten *Obosom* is associated with Botenso, the first settlement where the Nchiraa people are believed to have settled when they emerged from a hole in a valley forest known as Worobo. According to an informant, the Boten sacred grove used to be a vast forest with granite outcrops. People were afraid to enter because the deity Boten and other powerful spirits, including *mmoatia* (dwarfs), were believed to inhabit the site (Nana Agyemang *pers. comm.*). According to this informant, most people migrated from the settlement to found the present day Nchiraa, an event that he could not explain. Perhaps this might have arisen because of the poor accessibility to the place since Nchiraa, about 15km away, is easily accessible from other major settlements in the Brong Ahafo region. However, it was mentioned that, with the massive migration from the community by the indigenous people, Botenso became a predominantly immigrant settlement, with most of the migrants coming from the northern regions of Ghana.

It was emphasised by the informant that the sacred grove and other adjacent forest have since been cultivated intensively with most of the forest, including the Boten sacred grove, replaced by *esere*. It is even believed that the deity Boten has left the forest. This is because some youngsters in the family that manage the god realised that its physical representation (a miniature man-made pile of earth) contained gold and therefore stole it. Also, for the past couple of years the deity Boten has not had a permanent *Okomfo*, because most of the qualified young men and women in the family have become converted Christians or Moslems. It is generally believed that a god becomes quiescent when either the medium is dead or because the god has somehow 'left' its abode (McLeod 1981). A migrant farmer in the community captured the inaction of Boten as:

"The sacred grove has been degraded because Boten and the spirits have accepted bribes from individuals to farm in the area" (Despwri Clement *pers. comm.*).

He explained that people who encroached on the grove or used the land for farming left sacrificial chickens or sheep, eggs and yams in the forest close to the Boten *asoneyeso* (shrine). This was to pacify the god. He indicated that several people became convinced that they could crop the place without retribution from Boten. Several indigenous people used migrant farmers as front men to crop the forest. Migrants, who did not have any regard for the *abosom* in the community or in desperation for land, collaborated with the indigenous people to crop the site. However, some migrants have unknowingly been lured by indigenous people (who feared retributions from Boten) to farm in the area under the pretext that the land belonged to them.

Several other groves in the community have undergone similar changes. They have been cropped, with their sizes drastically reduced or completely decimated. For example, Worobo, an ancestral forest (*mpaninpow*) with a perennial waterfall and believed to contain the hole from which the ancestors of Nchiraa emerged, which was conserved as sacred forest because of the belief that ancestral spirits live there, is seriously threatened by farming activities in its upper reaches.

Also, Ntwokom, which was said by informants to have been a vast forest in the past, inhabited by *mmoatia*, *sasabonsam*, primates, elephants and other wild animals, has been completely decimated. Local memories of the sacred forest indicate that it served as the watershed for the Ntwoko stream and was the shrine for the local rain god. It was also an area where the *kra* (soul) of a seriously-ill person could be called to verify whether he/she was going to die. As with similar beliefs observed amongst the Akans (McLeod 1981), the forest acted as a transitional place for *kra* that were entering the community and those which were leaving for the spirit world. Several informants indicated that, in the past, the place was feared and nobody entered.

The only sacred grove which is still reasonably conserved, though the priest (*Okomfo*) reckoned that its size has reduced drastically, is the Brabo sacred grove. Unlike the other sacred groves, the forest and Brabo *obosom* is supposed to be privately owned by a colonial ex-serviceman, who bought the land several years ago from the then chief of Nchiraa. The family has since owned and managed the forest and Brabo. There is, however, severe encroachment in the area especially for *petra*, intensive dry season vegetable production, and commercial maize farming. This has led to the degradation of the greater part of the forest, including the sacred area where Brabo used to be kept by the administering *Okomfo* for consultation, rituals and conciliation. Consequently, a physical manifestation of the god has been removed from the midst of the forest

and is currently housed in the farmhouse, where the *Okomfo* lives. He explained that some local people who feel that the arrangement between the elders of the community and his great grand father (maternal line) was wrong have been encroaching on the land.

Buabeng Fiema Monkey Sanctuary

The Buabeng Fiema Monkey Sanctuary is dedicated to Lowe's Mona (*Cercopithecus campbelli*) and Black and White African Colobus (*Colobus polykomos*) monkeys. The sanctuary is also associated with the Daworo *asubosom* and with the *omanbosom* of Buabeng, which is also believed to be the 'spiritual owner' of the monkeys. They have been referred variously to as the 'children of the gods' (Akowuah *et al.* 1975) or the 'offspring of the gods' (Fargey 1991; Ntiamoa-Baidu 1995). This derives from the belief that the patron goddess of Buabeng, Daworo, who is considered to be the 'owner' of the monkeys, fell in love with another powerful local deity, Abodwo, of the twin community of Fiema. The gods are believed to have together maintained the monkeys.

Local people estimate the size of the sanctuary as 160 hectares (Okyeame Kwame Abora *pers. comm.*). Perhaps this includes the whole area in which the monkeys roam. Measurements taken by the Ghana Wildlife Department put the size of the sanctuary at 36.5 hectares of dry, semi-deciduous forest (Fargey 1991; Decher 1997). But, it is estimated that the monkeys roam within a radius of only about 4.8km (Fargey 1991). The population sizes of the Black and White Colobus and the Mona monkeys within the sanctuary are estimated at 128 and 216, respectively (Fargey 1991). Present local estimates suggest that their populations may have doubled since the time Fargey conducted his studies. This is attributed to the fact that the animals are reproducing well and enjoy improved protection from the local people, including the cooperation of other neighbouring communities (Kwaku Akowuah *pers. comm.*).



Plate 2. Mona monkeys in Buabeng Fiema Monkey Sanctuary.

Recently, an additional 16.2 hectares have been set aside to protect the monkeys (Decher 1997). This is an extension into the lands of neighbouring communities (Busunya and Akrodwa), which have recently given their commitment to 'welcome and protect' the monkeys on their lands (Kwaku Akowuah *pers. comm.*). This was attributed mainly to the potential benefits that these

communities perceive from tourism. There is a growing anticipation in the surrounding communities that the government will construct certain basic amenities and infrastructure in the fringe communities in view of this potential. However, probably only those communities where the monkeys roam or that have allowed an extension of the sanctuary into their lands will be the beneficiaries.

The history surrounding the Buabeng Fiema sanctuary is very long and sometimes confusing. It has often been a source of tension between the two main communities, Buabeng and Fiema, which are on its fringe. Each of the two communities has at various times claimed to be the real 'owner' of the sanctuary and the monkeys. However, because both communities have a strong social, cultural and spiritual attachment to the monkeys, the traditional council decided that both communities should manage jointly the monkeys and their habitat.

Stories of the origin of the monkeys and the settlements that fringe the sanctuary and the relationships between the animals and the communities vary (Fargey 1991). The local people of Buabeng trace the origin of the monkeys to about 300 years ago when a legendary hunter, Gyankoma, on an expedition in the forest (the present sanctuary) encountered the animals (Queen of Buabeng, Buabenghemaa *pers. comm.*). He found a pot with two Lowe's Mona monkeys sitting around it. The hunter brought the pot to the settlement, and the next day the monkeys followed him into the village and sat around the pot. Later on, two other Black and White Colobus (*Colobus polykomos*) monkeys, were also found around the pot. Intrigued by this, the village elders consulted Daworo (*omanbosom*) who prophesied that the monkeys would bring honour to the Buabeng community and the entire Nkoranza area. Daworo instructed that some rituals be performed to make the monkeys come and stay permanently in the area and to multiply.

It is believed that Daworo instructed that anyone who killed any of the animals would suffer some form of tragedy. Over the years the monkeys have increased in numbers and have predominantly occupied the area in the vicinity of Buabeng and Fiema. From that time onwards, anyone who killed a monkey is said to have suffered a tragedy. A common effect if a man killed one of the animals was that his child would be stillborn. Various forms of spiritual punishment or visitation have, to date, befallen anyone who kills one of the animals.

Local people believe that the monkeys have *tumi* like other wild animals, trees and rivers, which are usually associated with *abosom* and other spiritual forces. The monkeys are treated as the "children of the gods" (Akowuah *et al.* 1975) and also believed to be part of the ancestry of the communities. The monkeys are of spiritual and mystical relevance to the Buabeng Fiema community. For instance, certain behavioural patterns on the part of the animals act as signals of death and rain. Local people have consistently observed that whenever the Black and White Colobus monkeys smear themselves with red soil and parade in the main street of the village, an elder dies (Okyeame Kwame Kodom *pers. comm.*). This informant also indicated that when the animals troupe across the village wailing, a citizen living in a major town would die. It has also been observed that when a large Colobus is seen climbing a tree with several others following, an important person from the community will die. When the animals wail in the dry season it signifies rain within the next couple of days. In symbolic terms, an informant claimed that the people regard the animals as their kith and kin because of the various mystical signs they give them.

When a monkey dies, it is buried as a human being i.e. placed in a coffin, and all the necessary rituals are performed (Kwame Owusu *pers. comm.*). This informant emphasised that retribution, including some tragic incidents, have befallen those who deliberately killed any of the animals. His uncle, Kwabena Manu of the Saviour Church, became "pregnant" - developed a swollen stomach - and died when he killed one of the monkeys. Thus, the monkeys are generally regarded with *suro* (awesome reverence and fear). Until the mid-1970s, the traditions and local representation of the animals, and the Daworo *bosom* which was believed to own them, were strong enough to ensure their protection.

It is important to note, however, that the present sanctuary was used until the mid- 1970s for farming, especially cocoa production, whilst the local people still consider the area to be the domain of Daworo, who is believed to be physically manifested in the form of a small stream in the forest (Queen of Buabeng, Buabenghemaa *pers. comm.*). Thus, the local people manage the forest for its spiritual significance and also for their subsistence. Remnant cocoa trees and other fruit trees (mango, papaya and citrus) are found in some portions of the forest. It was mentioned by the Queen that tall trees were intentionally left for the monkeys. To facilitate this dual function of the forest, and to minimise the encounter of Daworo with *efi* (filth), *obosomfie* (temple) was built for her, which housed the shrine in the community. However, the deity as she is manifest in the *obosomfie* is in fact a collection of potent substances from the forest. The community has recently rehabilitated the dilapidated *obosomfie* with assistance from the Ghana Tourist Board and the United Nations Development Programme (UNDP).

Thus the local people interacted with the monkeys, which had become 'sacred' and protected by Daworo *bosom* (Plate 3) and traditional beliefs, whilst the forest was also used to meet subsistence needs. However, in the 1970s, changes in local perceptions driven mainly by Christianity threatened the monkeys and their habitat. Consequently, the monkeys and the forest were placed under the dual protection of the community and the Wildlife Department of Ghana (Kwaku Akowuah *pers. comm.*).

In the run up to the present arrangement (i.e. in the early 1970s), some religious groups, particularly the Saviour Church (*Gyedi*) in the community, were openly hunting the animals (Fargey 1991). Some local people intimated that the group looked likely to overrun the traditional beliefs and protection. Informants said that the group killed the monkeys to prove to the people that it was useless to believe in the spiritual powers that were associated with the animals and Daworo.

Whilst some people were challenging the potency of the goddess Daworo to protect the animals, traditional fines imposed on those who hunted the animals were also not heavy enough to serve as a deterrent. Informants said that offenders were asked to pay a fine of a sheep and a bottle of alcohol (schnapps). The fines were considered light by the church members who were bent on breaking the myth and taboos that surrounded the monkeys and Daworo.



Plate 3. Daworo *bosom* of Buabeng.

They considered it worthwhile to break the taboos and to pay those fines, and even risk death to demonstrate that the taboos around the monkeys were false, and that the goddess was not powerful enough to kill them when they attacked or killed the animals. Although local people associated certain tragic deaths and strange illnesses such as the swollen stomach and swollen legs of some members of the church as retribution from the goddess, this did not deter the congregation. This was, in fact, a confrontation between traditional and orthodox religious beliefs.

This caused some opinion leaders in the community, led by Kwaku Akowuah (considered to be the originator of the Sanctuary), to seek the assistance of the Game and Wildlife Department for protection for the monkeys.

Unlike the other sacred sites in the other study communities, use and access was not restricted until 1972, when the lives of the monkeys were threatened. Farming and hunting in the sanctuary is now banned. The collection of minor non-timber forest products (NTFPs) is permitted on a non-commercial scale within the 'outer circle' (demarcated with a track and teak trees) of the sanctuary. This is restricted to herbs and dead wood for fuel. The setting of traps is also banned on farms that fringe the sanctuary. The site has since been promoted as a tourist attraction (Kwaku Akowuah *pers. comm.*). However, it must be emphasised that the monkeys and the forest are still associated with the traditional religious beliefs; informants indicated that traditional religious beliefs alone could not have protected the animals and the entire sanctuary. There is, however, encroachment on the fringes of the sanctuary for farming. Traps are also set in adjacent farms, which have occasionally caught some of the monkeys (Kwaku Akowuah *pers. comm.*).

Bofie Sacred Grove (*Ghonno*) and *Jinatra*

Bofie Sacred Grove is estimated by local people to be 1.0 km square. Unlike the Buabeng Fiema Monkey Sanctuary, it is not associated with any 'sacred' animals. No community has ever contested its ownership and it is managed without external technical support from any agency. It has been sustained over the years through tradition, and the local people prefer to maintain their control and management of the grove with little or no external intervention. Only two formal studies have been carried out in the grove; the first one was by someone the local people described as a forester in the early 1980s and more recently by the Bureau of Integrated Rural Development (BIRD) of the Kwame Nkrumah University of Science and Technology (KNUST) in 1996.

Little has, therefore, been written about the grove, and not much is even known about it even within the Wenchi district. The principal similarity, though, with Buabeng Fiema and the other sacred groves (in Nchiraa and Dotobaa) is that it is also enshrined in traditional religion. It is considered to be the abode of both ancestral spirits and *abosom*. Local oral history indicates that the area was previously an ancestral settlement, *amanfooso*. Local people hold the view that, since their ancestors were buried there, their spirits still live in the forest and, thus the area must not be disturbed. As noted elsewhere (Rattray 1923), these myths and traditions are substantiated in some respects by visible proofs. Thus, the preservation of the area apart from its spiritual significance serves as a charter for the ruling clan of the village, who claim their ancestors lived in the place. The grove, or *Ghonno tra*, as it is known locally, is also the abode of Kramo (rain god) and Chin, a river deity (*asubosom*). Annual rituals are still performed by village elders to Kramo and Chin for rain and protection, respectively.

According to the chief of the village, the original settlement (*amanfooso*) which forms the sacred grove was abandoned by their ancestors for the present settlement about 100 years ago. Oral history dates this to around the time that the British fought the Ashantis in Kumasi and deported the Ashanti King and the Queen Mother of Ejisu, Yaa Asantewaa, to the Seychelle Islands. Thus, the sacred grove is estimated to be about 100 years old. One of the reasons for the departure of their ancestors from the area was the frequent flooding of the river Chin, which was then very close to the settlement.

Another narrative is that an adjoining forest to the settlement, known locally as *Jina tra* (or dwarf-land) was inhabited by dwarfs, spiritually powerful beings, which were considered by the elders as too risky to live close to. They also believed that a two-headed python, which was a spiritual collaborator of the dwarfs, inhabited the forest. Local stories indicate that the python was believed to be able to metamorphose into a human giant, whose form was so frightening that not even hunters could enter that forest. It was believed that these beings abhorred noise and farming close to them, so the ancestors decided to leave the place. Evidence of past habitation of Ghonno includes cooking pots and other household items. Also, local people insist that remnants of some buildings still exist in Ghonno.



Plate 4. Bofie sacred grove showing the Chin river deity.

Farming in Ghonno stopped about 40 years ago. One school of thought attributes cessation of farming in the area to the increase in the population of livestock in the community. It was explained that everybody (or at least a relation) has some livestock (especially sheep, goats and cattle). Due to the increasing population of the animals, which are mainly grazed in the area, it became impossible to grow crops there. The village chief and some elders, however, insisted that they themselves caused farming to be stopped in the area because of the fear/reverence (*suro*) for the ancestral spirits and Kramo that dwell in the area. Farming was also stopped to protect the river Chin (a deity) and other spirits that were believed to inhabit the area. The elders intimated that even when they were farming in the area, certain pockets were not cropped; the area around Kramo, the corridor along the Chin, and the vicinity of the burial grounds of their ancestors, *nsamanpow*, were not used for farming. Grazing was permitted in the area during the dry season. As observed elsewhere in Ghana (Ntiamao-Baidu 1995; Abayie Boateng 1998; Appiah-Opoku and Hyma 1999), these practices, especially river corridor management, were part of a complex traditional system that was used by the local people to protect their only water source. In fact, local people attribute the regeneration of the forest to both anthropogenic and biophysical factors. It was mentioned that, when the area was abandoned as human habitation, the greater part of it was (grassland) and *mpe* (transition between *esere* and secondary forest re-growth). The chief had this to say:

"The soil in the area is fertile because we burnt the grass in the area especially for hunting, which fertilised the soil and gave rise to the trees" (Nana Asamoah, *odikro* of Bofie *pers. comm.*).

It is also important to note that several local people indicated that until recently, when Islam and Christianity changed the beliefs of most people in the community, the *jina tra* (a piece of adjacent land) was also not farmed because of fear of retribution from the dwarfs and other spirits that were believed to inhabit the area. The village chief intimated that the spirits would

allow prospective farmers to prepare the land, but the farmer would either fall sick or some other misfortune would befall him. This would prevent the person concerned from continuing to farm. Therefore, at best one could plant crops but would not live to harvest them. The chief indicated that the elders would love to have these spirits continue in the area, to put fear into youths, so that they would have respect and fear (*suro*) for what the elders tell them. He said, "But it is unfortunate that these spirits do not exist on the land today". He explained that the advent of Christianity and Islam had driven away the dwarfs and the spirits. Some indigenous people also came to believe that the spirits did not like things like the lights of hunters, which they continuously used in the area. Generally, the local people believe that the dwarfs have vacated the area.

DIFFERENCES AND SIMILARITIES BETWEEN SACRED GROVES IN THE STUDY COMMUNITIES

In this section, the characteristics which all groves possess, and those that only some have, will be discussed. Factors that are causing degradation and those which enhance maintenance of the sacred groves will also be emphasised.

Characteristics

The local oral histories and narratives of the sacred groves in the study communities discussed above suggest that the origins of the sacred groves in the four study communities derive from the dedication of such areas to local deities and spirits perceived to be dwelling in such areas (Dorm Adzorbu *et al.* 1991; Adomako *et al.* 1998; Subash Chandran and Donald Hughes 2000). The sacred groves are related to more than one particular deity or spirit.

In all the communities, there is one striking common characteristic: the association of a grove (s) with a rain god and/or river god (*asubosom*). Local narratives and oral history about this association, as explained earlier, suggest a relationship between gods, water and fertility (Wessing 1999). The spiritual potency of water (Subash Chandran 1998; Appiah-Opoku and Hyma 1999), whether it be in rain, a river or a pond, is believed by local people to have cleansing, healing and protective powers, enhancing fertility in women and the productivity of crops. The failure of rain in its season may be attributed to offences against the gods; rain can be requested from the gods in times of extreme drought by performing rituals of propitiation and prayers to the gods (Adomako *et al.* 1998). It must also be noted that the characteristic image of groves with water in all the study communities is common to most groves in Ghana (Ntiamoabaidu 1995), where they serve as watersheds. It has been argued that this is a universal feature (Subash Chandran and Donald Hughes 2000) that dates back to ancient times, especially in the Mediterranean region and India where groves protected watersheds and springs.

Another common characteristic of the sacred groves is the dedication of particular areas as the *genius loci*, or spirit of the place. At such places a shrine (*asoneyes*) may be created for the deity. Other representations may be recognised, for example, the granite outcrops of the *Obokese* ("big stones") grove of Dotobaa and the *Zein* (*Ceiba pentandra*) of the Bofie sacred grove, which are regarded as the abodes of gods in the groves. It must be emphasised that the god or deity is, however, perceived to be present in all parts of the grove.

The bringing of forest gods into the community in a physical form is usual amongst the communities. All the forest gods have their physical representation in the communities. In Nchiraa, it was mentioned that, under intense encroachment on the Brabo sacred grove for farming and the possibility of the Brabo god being stolen, it has been removed from the forest to the house. The Boten god, who was noted earlier as having been stolen by some family members of the 'fetish' priest because of the gold it contained, was subsequently housed in the Botenso community. In Bofie, the Kramo and Chin gods have physical forms in the community. The Daworo goddess of Buabeng Fiema and the Asuonyima god of Dotobaa are also represented physically in the settlements. And, as noted by McLeod (1981), the common mode of bringing forest gods to the community was to choose a suitable receptacle. This is usually a silver or brass container (*yawa*), filled with objects and pieces of animal and vegetable matter, which helped in 'holding' the god so that it entered the shrine through the fetish priest or priestess as medium (McLeod 1981). Typically (see Plate 9 of Daworo god above), the physical representation of the god itself is a wooden or earth idol made in the sex of the god, but also incorporating gold believed commonly to possess immense spiritual potency (*tumi*), combined with other forest materials (leaves and animal products such as the skin and heart of spiritually-powerful animals: lions, leopards and duikers) moulded into the wooden or earth idol.

The use of silver and gold or precious metals was emphasised to be important because of the perceived *tumi* they possess. Perhaps this conforms to the observation of Frazer (1957) amongst heathen Estonians in relation to iron, that it contained a charm which could render harmless the spirit possessed by other dangerous entities, including crops cultivated in the fields. In fact, it is not uncommon to find gods in the study communities, as elsewhere in southern Ghana, to be associated with precious metals especially gold (McLeod 1981). This is exemplified in the case of the Asuonyima god who, in the past, gave gold as gifts to several of his followers. The stealing of the physical forms of several gods was attributed to the gold they contained (Botenso Odikro *pers. comm.*). It was emphasised that the creation of the representation, or the removal, of the god to the community does not denote its absence in the grove, but was used to make easy access and consultation or propitiation in times of emergency (Nana Dotobaahene *pers. comm.*). Also, in a situation where vandalisation and theft of the god is suspected, for example, in relation to the Brabo god of Nchiraa, the physical representation in the forest is removed to the community. The performing of the necessary rituals and propitiation of the god (Kwaku Akowuah *pers. comm.*) usually precedes this process.

Some sacred groves are associated strongly with certain animals. The Buabeng Fiema sacred grove (or monkey sanctuary) has a strong association with 'sacred' monkeys. Traditional belief in the *tumi* of the monkeys (Ntiamoa-Baidu 1995; Anane 1997; Abayie Boateng 1998), and the fear associated with retribution from the god supposed to 'own' the primates, have partly served to protect the monkeys and preserve their habitat. In addition, the community has been assisted since 1975 by the Wildlife Department in protecting the monkeys and their habitat (Decher 1997). Similarly, the Bofie sacred grove has a strong association with animals; the rearing of livestock and the use of the grove as a feed corridor in the dry season and periods of drought. It also serves as a barrier which prevents livestock from causing crop damage in fields. These attributes of the two sacred groves are of considerable economic value to most people in the two communities, and have contributed greatly to the maintenance of the sacred groves.

Factors causing degradation or threats to sacred groves

Factors that cause degradation or serve as threats to the sustainability of groves are complex and interrelated. They arise from commercial factors such as farming and logging, bush fires, the weakening of traditional institutions and the lack of governmental support, the intervention of local government agents and the usurping of the powers of traditional authorities in local resources management.

In all the study communities, as already pointed out in the discussions on the various sacred groves in the study communities, most local elders attributed the degradation of groves to the receding of the forest spirits, especially *mmoatia* and *sasabonsam* from the groves. It was mentioned that the noise of guns, the smell of gunpowder and the entry into the forest of menstruating women, have caused most of the forest spirits to recede. Subsequently, the *tumi* in the sacred groves, which prevented their exploitation, has declined. In fact, it was observed during the fieldwork that the sacred groves which were degraded or decimated were those which were associated with mythical and legendary spirits rather than with ancestral spirits (see Table 1). For example, the Ntwokom sacred grove in Nchiraa, which has been decimated, was attributed to the receding of the *mmoatia* and *sasabonsam*. Even in Bofie, where there is a comparatively well-preserved sacred grove (*Ghonno tra*), the degradation of the *Jina tra* (dwarfs forest) was associated with the receding of the legendary and mythical spirits from the forest. Although it may be difficult to assign the explanation for degradation of a sacred grove to a particular factor, it appears that the mythical and legendary forests are more threatened than those that are tied to ancestral spirits and gods. Lebbie and Freudenberg (1996) have made similar observations in the Myamba district in Sierra Leone, where young boys noted that they have not experienced some of the mysteries surrounding a particular legendary forest. Thus, they were at liberty to harvest resources from such forests. However, it must be emphasised that oral narratives in all the study communities, as elsewhere in Ghana (Ntiamoah-Baidu 1995; Anane 1997; Abayie Boateng 1998) and across West Africa (Warren and Pinkston 1997; Decher 1997), indicate that local beliefs, perceptions and particularly the fear of gods, spirits and the *tumi* associated with sacred groves and the general landscape, are eroding.

It must also be noted, that there is an existential connection between the spirits and deities in the forest and the traditional leaders. Thus, the receding of these forest spirits and deities, as noted by local leaders, have also caused the decline in the respect and fear of chiefs, elders and gerontocracy who are the custodians of the sacred groves and ensure their survival. In fact, in common with most sacred groves in Ghana (Adomako *et al.* 1998) and across West Africa (Lebbie and Freudenberg 1996), powerful individuals in the communities (chiefs, elders and gerontocracy) who were often vested with special authority as 'caretakers' of sacred groves, also derived their spiritual power from the gods and spirits in the forests. They ensured compliance with the rules and regulations that governed access and the extraction of forest products (timber), although in most cases the protection of the groves was supposed to be the responsibility of the entire community (Dorm Adzorbu *et al.* 1991). Therefore, the receding of the forest spirits and deities, and the subsequent decline in the *tumi* in the sacred groves, may be major factors underlying the degradation of the groves.

As noted elsewhere (Falconer 1992), the perceived *tumi* of the gods and spirits associated with the grove primarily determined the reverence for the grove and also enhanced the compliance with entry restrictions into the groves, especially on *dabɔnne* days (Amoako *et al.* 1998).

Farming was also prevented by the fear of retribution from the spirits and deities that lived in the sacred groves. But, as indicated earlier, prevention of entry and the exploitation of the groves are becoming increasingly difficult to achieve, especially in Dotobaa and Nchiraa where farming and other human activities threaten most groves, which local elders attributed to the decline in the *tumi*. In fact, local oral narratives suggest that the traditional mechanisms, especially the restraint caused by the belief in *tumi*, may no longer be sufficient to maintain the groves as observed in most parts of southern Ghana (Decher 1997).

Factors which encourage maintenance of the sites

An important observation made in relation to the sacred groves in the four communities is the relative differences in the level of conservation and structure. The sacred groves in Bofie and Buabeng Fiema are much better preserved and protected than those in Dotobaa and Nchiraa. There are two major factors that have enhanced the maintenance of sacred groves in these communities: attachment of sacred groves to animals and governmental support in protection.

From personal observations and interviews with key informants in Buabeng Fiema and Bofie, it was realised that the attachment of an animal component to a sacred grove enhanced their protection by local people. Managed either *in situ* as 'sacred' or as an 'externally-dependent' economic enterprise ('controlled livestock access' where the grove serves as a feed corridor or pasture), the animal-sacred grove relationship enhanced community commitment to protect the area. For example, in Bofie the leader of the fire volunteer group indicated that most community members are concerned and co-operate with the group to prevent fires from spreading from farms into the sacred grove during the dry season, because of its use for grazing and watering of livestock (Benjamin Mensah *pers. comm.*). In Buabeng Fiema, local people (Fargey 1991) acknowledge the economic potential of the sanctuary (tourism and its related infrastructure and economic activities).

The existence of economic interests do not suggest, however, that the local perceptions of the sacred groves are divorced from the shared common belief that these areas are the domain of spirits and gods, which in the past fostered group solidarity (Lebbie and Freudemberder 1996). It does emphasise the argument that local people in traditional societies are always seeking ways to integrate their material and spiritual lives, which, unlike most western cultures, are not separated or reduced into distinct entities (Saraswati 1998). Thus, in Buabeng Fiema and Bofie, the economic benefits presently derived from the groves and their perceived economic potential for present and future generations may enhance the sustainability of the groves. Threats to the sustainability of sacred groves posed by changes in local cosmologies, particularly the decline in traditional religious beliefs and values associated with sacred groves, may be reduced by alternative economic livelihoods that are less dependent on land and forest-related resources (Soemarwoto 1991; Warren and Pinkston 1997). This was observed in Buabeng Fiema where the community derives income from visits by tourists to the sanctuary, and where there is an increasing awareness of the eco-tourism potential of the monkey sanctuary amongst the local people (Fargey 1991). Unlike the sacred groves in Bofie and Buabeng Fiema, the groves at Dotobaa and Nchiraa have no attachment to 'sacred' animals and the use of livestock. The protection of the sacred groves in the communities derives mainly from the original traditional cultural and religious concepts associated with the gods and spirits in the groves. However, beliefs associated with these have waned.

CONCLUSION

In this paper it has been shown that sacred groves are pieces of land set aside mainly for spiritual purposes (Abayie Boateng 1998), and are derivatives of the local concepts and beliefs in the *tumi* suffused in nature by *Onyame* (Rattray 1923; McLeod 1981; McCaskie 1995). They are also rooted in the local oral traditions of the origin and founding of settlements, which emphasise the spiritual attachment of local people to these sites (Rattray 1923; Wessing 1999). They underline the basic traditional philosophy of local people, who wish to live in harmony with the environment, founded on the abiding respect, reverence and fear (*suro*) for the *tumi* suffused in nature by *Onyame*. Sacred groves constitute a sacred trust sustained and protected by a spiritual power (*tumi*), and by the pervasive influence and abiding relevance of traditional beliefs whose validity seems now only too evident to be questioned (Hagan 1998). It is clear from the traditional oral narratives of all the study communities that the fundamental threat to sacred groves, and perhaps most traditional natural resources management systems, derives from the changes in the perceptions and attitude of local people towards *tumi*, although this is closely entwined with demographic and economic pressures.

The paper also demonstrates that in contemporary natural resources management, the sacred grove model may still be used as a means of restoring and protecting landscapes in indigenous communities. Even in communities where population explosion and economic pressures have reached thresholds that undermine the natural landscape, the model may still be useful to keep pockets of forests within the landscape (Fairhead and Leach 1998). For instance, in communities which are supported by government and non government agencies to keep sacred groves as feed corridors or tourist attractions, the survival of these artefacts have been enhanced due to the economic benefits the local people derive (Fargey, 1991).

Also, across West Africa and other parts of Africa, the concept of collaborative natural resources management, which derives its strengths from local participation and use of indigenous knowledge, can explore the local beliefs, rules and regulations which were used to protect and maintain sacred sites to deepen local participation in sustainable natural resources management.

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