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The Sacred Groves of South India: Ecology, Traditional Communities and Religious Change

Les forêts sacrées du district de l'Uttara Kannada dans l'Etat de Karnataka dans le sud de l'Inde sont au nombre de plusieurs centaines. Traditionnellement, elles étaient contrôlées et protégées par les communautés villageoises. Plusieurs existent encore aujourd'hui et servent pour le culte, même si elles ont diminué en surface et en nombre. Ce déclin est dû en partie aux changements religieux, dans le sens que l'essor de l'Hindouisme brahmanique a absorbé les dieux et les déesses locaux dans le panthéon dominant. Des temples ont été construits dans ces forêts sacrées ou tout près de celles-ci, et les forêts elles-mêmes ont été abandonnées. Ce qui a été encore plus néfaste pour ces forêts, c'est le fait que le gouvernement s'en est déclaré le propriétaire, et que le pouvoir colonial britannique, et maintenant le gouvernement indien, se sont chargés de leur gestion. Le délabrement de ces portions restantes de la forêt tropicale originelle à feuilles persistantes est concomitant à la disparition d'espèces rares et à la détérioration de la biodiversité. La préservation des forêts sacrées dépend de l'engagement renouvelé des communautés villageoises pour assurer leur protection.

The practice of protection of patches of woods as sacred is ancient. Groves of trees dedicated to the worship of the gods are mentioned by Greek and Latin authors. The Roman poet Ovid said, "Here stands a silent grove black with the shade of oaks; at the sight of it, anyone could say, 'There is a god in here!' " (*Fasti* 3: 295). One might think that such a grove, and such an idea, are things that passed away with the ancient world. But scores of sacred groves persist in many parts of India, although forest exploitation and religious changes have interfered with their conservation.

Among the surviving sacred groves of India are many associated with villages in the mountains above the western seacoast. One of these villages is Mattigar, a community of Karivokkaligas, hunters and gatherers who also engaged in shifting cultivation and have turned to settled agriculture in recent years. The authors visited in 1994. Surrounded by an area largely cleared for crops stood the majestic grove called Devaravattikan, a fragment of the original evergreen forest, tall, cool, dark in color, one hectare in size. Thirty meters overhead, the upper foliage formed a polygonal mosaic, with narrow spaces between adjacent trees in the "crown avoidance" typical of the tropical evergreen forests of South Asia. We entered with respect; offerings had been placed, but we could see no temple and no carved stone

figure. As we left, we met an old man who explained, "There is no image. The gods there live among the trees."

Throughout history, many peoples customarily respected sacred groves. These were sections of forest where spiritual beings were believed to reside, and where ordinary activities were prohibited, such as tree felling, gathering of wood, plants and leaves, hunting, fishing, grazing of domestic animals, plowing, planting or harvesting crops, and building ordinary dwellings. Worship, offerings and sacrifice may or may not customarily have occurred inside. Anyone who delves into James George Frazer's encyclopedic *The Golden Bough* (1890) can find evidence of groves around the world. Much new information has appeared since Frazer, and it is clear that sacred groves were, and in some cases still are, a feature of human culture in the Near East, Europe, North and Sub-Saharan Africa, India, Southeast Asia, Oceania, China, Japan, Siberia and Native America (Hughes and Swan, 1986).

When did sacred groves originate in the course of human cultural change? While hunter-gatherer societies often had sacred places within forests, the differentiation of sacred groves from surrounding land probably first became clearly visible with the appearance of shifting cultivation: they were the areas spared from slashing and burning. They persisted in established agricultural communities, and even in many urbanized societies. A typical practice of animism, the tradition was sometimes continued, sometimes neglected, in the great world religions. Strictly monotheistic faiths have been less hospitable to groves, although there are exceptions to this rule.

Sacred Groves in the Western Ghats

In South India sacred groves still exist although the importance given to them is commonly, if sporadically, declining. Temples are being built for the gods but groves are no longer being dedicated to them. Data on South Indian groves come from direct observations, folk traditions, history and other literature. Several studies have appeared (Gadgil and Vartak, 1975, 1976, 1994; Chandran and Gadgil, 1993a; Nayar, 1987; Induchoodan, 1988; Unnikrishnan, 1995). For our case study we selected Uttara Kannada (North Kanara) and adjoining areas in Karnataka State towards the center of South India's west coast. The hills of the Western Ghats, seldom rising above 700 m, cover most of the district. The humid monsoonal climate with annual rainfall ranging from 2000–6000 mm, and the conservation ethics of the local communities, promoted luxuriant forests which today, despite nearly two centuries of commercial timber exploitation, cover about 60 percent of a total 10,200 square kilometers. Here forests, villages, cultivated and grazing lands and sacred groves form a landscape mosaic. The district is well known for its many spice gardens, and orchards of coconut, banana, mango and jackfruit. Only 12 percent of the land is under cultivation. Historically most of its forests, at one time or other, were subjected to shifting cultivation until this practice was prohibited late in the 19th century. As population was thin and the fallow period long, ecological succession on most of the abandoned slash and burn lands restored the forest vegetation.

The sacred groves which almost every village had, and the relics of which are still present, would have played a vital role in forest restoration.

The historic and prehistoric antecedents of sacred groves in South India are quite ancient. While the Rig Veda was being composed in the North, South India had agri-pastoral societies, including shifting cultivators, and hunter-gatherers. Coinciding with the decline of the Indus Valley Civilization, a major vegetational change occurred in Uttara Kannada. Palynological studies indicate that, beginning about 1500BC, there was an increase in savanna and a decrease in forests (Caratini et al., 1991). Although some suggest that this was due to the onset of a drier climate, a better hypothesis suggests colonization by agri-pastoral people as the reason for the change. This is supported by the fact that all the forest species earlier represented by pollen continue to be present to this day. Significantly, the more sensitive of them, like the dipterocarpus, now occur almost exclusively in some of the sacred groves. The practice of demarcating sacred groves, in all probability, began in Uttara Kannada with the arrival of shifting agriculture. The history of the South Indian west coast goes back beyond two millennia, when the ports traded actively in spices such as pepper, and perhaps in fine woods, with the Romans. The Mauryan king Asoka, in the 3rd century BC, sent an emissary to Banavasi in Uttara Kannada to spread Buddhism (Kamath, 1985). Banavasi subsequently became the capital of a powerful dynasty of kings, the Kadambas. They gave land grants to the Brahmins, who were, however, few in number. For centuries afterwards the Brahmins had little impact on the indigenous communities of the hilly and wooded region. On the other hand, Brahminic Hinduism spread through the plains under the patronage of various kings beginning in the Sangam period, from the beginning of the Christian era, absorbing local cults relating to sacred groves. Thus the pattern seen today emerged, with sacred groves missing from the plains but surviving in the highlands.

Despite the dwindling importance of sacred groves in Hindu religion generally, the Western Ghats remain rich in them. This may be due to the difficult terrain and consequently minor infiltration of Brahminic Hinduism into the religious life of the large majority of indigenous communities, including the tribal. Almost every village and town has its groves, ranging in size from clumps of trees to areas of a few hundred hectares. Most official records consider the *kans* of Uttara Kannada and Shimoga as distinct patches of fire-insulated evergreen to semi-evergreen forests with lofty trees in contrast to the other forests dominated by deciduous trees and bamboo and often traversed by annual fires. However, the links of forests with the gods of their respective villages were referred to by Buchanan (1870), who traveled through Uttara Kannada in 1801, soon after its takeover by the British: "The forests are the property of the gods of the villages in which they are situated, and the trees ought not to be cut without having leave from the Gauda or headman of the village ... who here also is the priest to the temple of the village god." About the village gods Buchanan stated: "Each village has a different god, some male, some female, but by the Brahmins they are called Saktis, as requiring bloody sacrifices to appease

their wrath."

These statements indicate that the forests were under the control of pre-Brahmin peasant societies, village communities with well-defined territories. It is notable that the cults of Sakti and Sakta, referring to the Mother and Father gods and goddesses of the pre-Aryan peoples of India, were absorbed into classical Hinduism in areas of high Brahminical influence in the early centuries AD (Thapar, 1979). Scores of male gods and spirits of the groves, both benevolent and malignant, were identified with Shiva and his various incarnations. Similarly the Mother goddesses were identified as Parvati or Durga, consorts of Shiva. These new identities given to the deities of the groves resulted in the Sanskritization of their names and construction of temples in the groves.

Kan forests, as they are called in our study district, are sacred groves, patches of natural tropical evergreen forests protected and used as places of worship by peasant communities. That the *kans* of Uttara Kannada and Shimoga are sacred groves can be deduced from the general taboo on tree felling within them and their association with the village deities. Since the *kans* have been protected since early times, they have remained free of fire, and the evergreen trees within them have survived. Ordinary deciduous forests outside the *kans* are swept year after year by fires set to prepare areas for planting. Most of the people associated with the *kans* in Shimoga district are Halepaik peasants, whereas in Uttara Kannada, several peasant communities such as Halepaik, Karivokkaliga and Halakkigowda are linked to the groves. The groves are cult centers for village communities comprising a spectrum of Hindu caste groups.

The original dedication of the groves is to local deities that are perceived as dwelling among the trees. In Uttara Kannada, the deities of the groves were not, and in many cases still are not, the characteristic gods of Hindu devotion such as Shiva, Vishnu, Parvati, Lakshmi, Ganapati, etc., but pre-Brahmin deities, mostly indistinct beings that may be represented aniconically. For instance in the sacred grove of Mattigar the female deity Choudamma and the male deity Jatakappa (the suffix -appa means "father", -amma "mother") are represented by two vacant cult spots. The presence of these deities is perceived in the entire grove by the Karivokkaliga peasants, and it is their place of worship to this day. An attitude that nature itself within the grove is sacred dominates the world view of many village societies. Stones or termite mounds may be present as cult objects. There are also dedications to animal deities such as the serpent (Naga) and tiger (Hulidevaru). These deities seem clearly to be those of hunter-gatherer groups, survivals of an early period in religion, often retained and passed on through the agricultural stage. The ability of Brahminic Hinduism to rationalize such local deities as forms of the great gods and goddesses of the pantheon, and to provide icons in the form of reliefs and sculptures, has encouraged some communities that hitherto kept the groves to identify the local with the universal, and to replace the devotion once accorded to the groves with that symbolized by images and temples.

Many activities are controlled in the groves to honor the gods by keeping

the original forest as undisturbed as possible. The groves are the property of gods and ought not to be damaged in any way. The borders of the groves are distinct. Specific rules vary from grove to grove, but in general the flora and fauna are protected from consumptive use. There are exceptions, and certain uses may be allowed in times of need.

The groves in the Western Ghats broadly come under two classes. The smaller groves are entirely protected; no tree felling or other biomass extraction may be carried out. On the other hand, larger groves function as resource forest also, offering both sustenance and ecological security. The people of the village may gather fallen deadwood, non-wood produce such as pepper, mango, jackfruit, etc., and tap toddy from a palm (*Caryota urens*). They tend wild pepper within the *kans*. The larger *kans* range in size from one or two to several hundred hectares. Villages like Archalli, Mulgund and Kodkani in Siddapur taluk (administrative unit) of Uttara Kannada have *kans* exceeding 100 hectares in area. In the neighboring Sorab taluk of Shimoga district 171 *kans* covered over 13,000 hectares (about 10 percent of the total geographic area) during the mid-19th century; Halesorabkan, the largest of them, had about 400 hectares (Brandis and Grant, 1868).

Today domestic animals are not prohibited from entering the groves, but it is likely that at one time they were excluded from *kans* that yielded much non-wood produce to village communities. Brandis and Grant (1868) noted the remains of trenches bordering the *kans* of Sorab in Shimoga. The groves were protected from plowing, sowing, and erection of unauthorized buildings. Women could go inside to gather non-wood produce, although not for worship. Tree felling was strictly prohibited.

In India generally, rules against cutting trees prevail in sacred groves. When three woodcutters were killed by a falling tree, it was thought to be punishment by the deity, not an accident; another account says that Manu's son Ila entered the grove of the mother goddess by mistake and was transformed into a woman (Gadgil and Vartak, 1994: 82). Custom prohibited "untimely hunting, killing of wrong species of animals which may be totemic or sacred ones" (Chandran, 1995: 161); there are of course many sacred animals that may not be killed outside groves: peafowl and cobra, for example. Many stories tell of hunters who entered a grove in search of prey and fell ill or died because of divine retribution. Use of resources other than wood and wildlife is commonly permitted; medicinal plants and leaves for fodder are often gathered, although such intrusions were undoubtedly less prevalent earlier when these items were plentiful outside the groves.

Responsibility for protecting groves and enforcing rules was assumed by the local community, since the grove was an integral part of village life. Village land was delineated in part by the location of its groves. State control over the groves of Uttara Kannada was minimal. In Uttara Kannada, local committees levy fines on offenders against the groves in some villages, as in Halkar. Groves still serve in some cases as symbols of local autonomy (Burman, 1992: 232). Many villages have several groves; Arendur, for instance, has 13 (Chandran and Gadgil, 1993a). Village ceremonies are held in them or immediately outside. Protection of the groves was believed to be enforced not by human authority alone, but by the gods as

well, as in the folk tales mentioned above. The village headman supervised the safety of the grove and obtained "permission" from the god before cutting down any tree (Buchanan, 1870). For any such appeal to the gods of the groves, it was and is customary to sacrifice an animal.

Groves and Ecological Conservation

The groves are part of a "mosaic landscape", forming "islands" of variable size within a pattern of other land uses. In pre-colonial times people gathered biomass routinely from ordinary forest (*kadu* or *adavi*). Shifting cultivation (*hakkalu* or *kumri*) was widely practiced by farmers who, by and large, respected the sacred groves (Chandran, 1997). Havik Brahmins raised spice gardens close to evergreen forests including the *kans*, which assured water supply, shade and leaf manure for their crops of pepper, cardamom, cinnamon, ginger, arecanut, and recently, also clove, cocoa and nutmeg. Villages, groves, other forests, cultivation fallows in varied stages of forest succession, pastures, fields and gardens, in totality, form a mosaic. Landscape heterogeneity and biodiversity are positively correlated. Groves formed part of a landscape of well-connected natural elements and functioned as refuges for many species of plants and animals (Harris, 1984). The connectivity of landscape elements, allowing mobility of species, would free the groves from some of the limitations of small islands (Forman and Gordon, 1986). Groves are "specimens" of the original ecosystems of the areas where they exist. The *kans* of every village would act as important refuges and seed banks for the natural enrichment of degraded secondary forests nearby (Joshi and Gadgil, 1991: 211). The archipelago of groves may assist the survival of threatened species, at least for a time.

Gadgil (1992) observed that sacred groves belong to a variety of cultural practices which helped Indian society maintain an ecologically steady state with wild living resources. In Uttara Kannada, it is possible to study the role of sacred groves in preserving biodiversity. Speaking of flora, it can be observed that the *kans* today are the best centers for the conservation of plant diversity. When the evergreen forest is cut, the first forest stage of ecological succession that replaces it is deciduous secondary forest. A study by Chandran and Gadgil (1993b) shows that the number of trees per hectare in the *kans* is about 400; in the deciduous forest it is 40. Viewed from a distance, the majestic dark *kans* are often clearly differentiated from surrounding forest not only by color and density, but also by height, since the emergent canopy trees rise over 30 meters. Within the *kans* from 30 to 50 species of trees can be found in one hectare, a diversity characteristic of evergreen forests of the Western Ghats. The sacred grove in Mattigar village has 60 tree species in one hectare (Chandran and Gadgil, 1993b: 38).

Groves also shelter rare habitats and endangered species. Scores of species of plants, including trees and lianas, are found in Uttara Kannada only in the groves, or have only lonely specimens elsewhere. A few of these represent the northernmost outliers of endangered species (Chandran,

1993). For example, *gurjan*, the mighty evergreen tree *Dipterocarpus indicus*, endemic to the Western Ghats, has the isolated northerly end of its range in the beautiful mountain grove dedicated to the "Mother of the Dark Forest", Karikanamma (about 20 hectares), and in the fine wetland grove, Katlekan ("dark grove", 1280 hectares). Katlekan is also the location of a rare threatened local ecosystem, a Myristica swamp. The notable species of wild nutmeg tree, *Myristica fatua*, rare in the Western Ghats, is found sheltered in this grove, which is also the unique locale for a rare palm, *Pinanga dicksonii* (Chandran and Gadgil, 1993a). As sacred groves diminish, the habitat types represented by them and the rare species in them are in jeopardy.

Sacred groves are also the only surviving habitat for a number of species of animals and enhance the supporting environment for others. The once rich mammalian wildlife of Uttara Kannada has suffered attrition; tigers, leopards, elephants, gaur, and other large species are seldom if ever seen, but peasants still hunt barking deer, mouse deer, blacknaped hare, porcupine and wild pig. The endangered lion-tailed macaques have been observed in Katlekan (Gadgil and Chandran, 1992: 183). Many birds frequent the groves and nest in them; a survey showed that about half the bird species in Siddapur district occur in sacred groves (Chandran and Gadgil, 1993b). As Banwari (1992) remarked, the sacred groves are found "at those places where the growth of forests is indispensable for maintaining the ecological balance". However, the surviving *kans* are extremely reduced in number and area, and the theory of island biogeography would suggest that biodiversity in them will continue to decline.

One reason why village settlements remain close to the *kans* and preserve them is that the evergreen forest is associated with watershed protection. The characteristic image of a sacred grove, both in art and in the actual landscape, includes a spring of water, a stream, or a pool, quite as much as a stand of trees. Dense forests regulate the runoff of the precipitation they receive. Like a sponge, the plants and soil hold water, preventing floods and releasing a year-round supply. Most sacred groves in South India contain or are close to perennial water sources. The *kavus* of Kerala usually have ponds and wells associated with them. The Government of Bombay in 1923 highlighted the watershed value of the *kans* of Uttara Kannada:

> Throughout the area, both in Sirsi and Siddapur, there are few tanks and few deep wells and the people depend much on springs ... Heavy evergreen forests hold up several feet of monsoon rain ... If an evergreen forest is felled in the dry season the flow of water from any spring it feeds increases rapidly though no rainwater may have fallen for some months.

It is of course the last such; it is a case of killing the goose to get at the golden eggs. The government made this a major reason for reservation of the *kans* and ordered that they never be cut for timber. Wingate (1888), a British Forest Officer in Uttara Kannada, observed: "They [*kans*] favor the existence of springs, and perennial streams, and generally indicate the proximity of valuable spice gardens, which derive from them both shade and moisture." Unfortunately, this governmental wisdom was later forgotten.

Even small sacred groves are associated with springs that dry up when the trees are felled. The *kans*, therefore, have an important role in watershed conservation. Peasants believe, with some justification, that forests bring rain. Sometimes the only source of water in a village is the spring in the grove. Groves can supply fresh water in regions where other water is saline (Burman, 1992: 228). Tradition always considers rivers and springs as divine, and watershed forests have sanctity attributed to them by the people of every village where they occur. Many springs and rivers in India are famous places for *tirthayatra*, literally, pilgrimage to sacred water.

Cultural Change and the Decline of the Groves

What cultural factors have caused the dwindling of sacred groves in India? It has been a gradual process linked to the absorption or subjugation of local cults by the text-based Brahminism. From the early centuries AD the system of granting lands to Brahmins in virgin areas by the feudal kings, including non-Aryans, became an established practice. This process included the incorporation of local cults and cult priests into the religious beliefs and rituals of the established religion.

The local deities to whom the sacred groves were dedicated have been in many cases identified with, or absorbed into, the great gods of the pantheon, due to the influence of a literary tradition dominated by great epics, priestly rituals, and the desire of the local community to assert its importance by impressive construction. These have often resulted in the erection of temple buildings and the diminution of the groves. There is also a tendency to relax the rules protecting the groves as the center of ritual moves away from the trees and toward the temple building. In earliest times, the grove was the temple; later the title of temple was usurped by the building, erected in or beside the grove. In several of the groves of the Western Ghats, as in the *devarakadus* (holy forests) of Coorg, it was felt that it was permissible to remove trees sparingly for the construction or repair of temples.

The elements of modern Hinduism with which the deities of the groves have become associated are fertility cults, especially those devoted to the worship of the mother goddess, and the cult of Shiva and snake cults (Thapar, 1979). Lord Shiva is an abstraction from nature. Under various names he is the central figure of many folk cults of India. He is the lord of mountain tops, vegetation and animals, including cattle and crops and the watershed. Originally a folk deity, formless or represented by lingam stones or termite mounds, he retained his earlier attributes when inducted into Brahminical Hinduism. The Hindu Shiva has snowy Mount Kailasa as his abode. His entangled hair perhaps represents the primal forest, from which gushes out Ganga, the most famous sacred river of India. The snakes coiled around his neck, leopard skin attire, and the trident in his hand, link him with wilderness and the aboriginal. His weapon of fire may be related to the burning of forests into ash, which in past centuries brought fertility to the depleted agricultural soils of tropical India. In iconography, this sacred ash besmears his body. His association with the bull draws him closer to

agriculturists. His favorite plants *madar* (*Calotropis*) of the desert, *bel* (*Aegle marmelos*) of the semi-arid, and *rudraksha* (*Elaeocarpus*) of the rain forest, and his headquarters in the snowy mountain, make Shiva a truly pan-Indian nature god.

Under the influence of the textual culture, the mother goddesses of the groves are increasingly being housed in large temples or small shrines. Karikanamma, "Mother of the Dark Forest", who hails from a beautiful grove of dipterocarps, has in recent years been housed in a temple nearby. She has been Sanskritized as Parameshwari, the consort of Shiva. The ancient natural uncarved rock that had embodied her was covered by a metal mask. A recent Havik Brahmin legend speaks of the goddess as being "rescued" from the barbarians of the forest. In urban areas of Uttara Kannada, under the influence of literary tradition, even non-Brahmins are effecting the same changes. Thus in the Shantika Parameshwari temple of Kumta, the original deity, the Mother Goddess, a termite mound of about 10 feet, is covered with a metallic mask of Parvati. The wooded hinterlands of the district are in the throes of Sanskritization, a repetition of the process that swept through other parts of India much earlier. Housing of the woodland deities in the temples or shrines leads to neglect of the groves. Nevertheless, Hindu tradition exhorts its followers to protect several species of trees as sacred and to raise groves of sacred trees in the premises of temples. Pipal (*Ficus religiosa*), banyan (*Ficus benghalensis*), fig (*Ficus racemosa*), mango (*Mangifera indica*), *champak* (*Michelia champaka*) and *asoka* (*Saraca indica*) are some such sacred trees.

Thus, just as local Greek gods were syncretized with great Olympian deities, many village gods were amalgamated into the Hindu pantheon. "The enlistment of Hanuman in the service of Rama signifies the meeting point of early nature worship and later theism" (Radhakrishnan, 1949). Worship dating from time immemorial was syncretized into Brahminical Hinduism. In this process, an older religion that valued nature was spiritualized, and worship that brought people directly before the many forms of nature was replaced by a more sophisticated iconography.

The transformation of grove into temple is sometimes so slow as to be almost imperceptible, but every stage of the evolution can be seen in Uttara Kannada: a grove with no icon at all, but perhaps with a sacred spring and a termite mound; then a carved relief or statue standing uncovered under the trees; then a small temple enclosing the spring or the mound; then a larger and more ornate temple, as the grove shows signs of ruin; finally a temple with a sacred tree or two beside it, the grove forgotten. Interestingly, this process recapitulates the history of Hinduism in much of India. There were no temples in the earliest Vedic, pre-Buddhist period. When they began to be built, they were of wood. In many villages of Uttara Kannada, until recent times timber was used only for religious buildings, not for ordinary houses, which are of earth, grass, and palm leaves. The wooden structure and the architectural environment similar to the groves was preserved in later stone temples in the dendritic form of columns. At many sites, temples of the deities are being built and groves are felled for the construction and maintenance of temples. Trees are sold off to get money to build temples. In

order to place this process in perspective, it is necessary to say something more about the changes that have occurred since the onset of British rule in India.

The Market Economy: Economic and Political Factors

The demands of a larger economy depending on trade beyond local ecosystems have been deleterious to the preservation of the groves. Appropriation of all possible resources by colonial exploiters, and by proponents of economic growth since independence, has damaged or destroyed many of the groves in India. Businessmen and government officials have usually viewed the groves not as sacred reserves but as sources of materials such as timber, fuel, leaf manure, bamboo and pepper.

The first European use of the resources of Uttara Kannada occurred in 1633, when the Portuguese in Goa made a treaty with local rulers to cut timber free of charge. In the following decades, the Dutch and British also entered the district to trade for teak, timber for masts, and spices. When the British occupied Uttara Kannada after 1799, they found it well stocked with forest resources, including the evergreen *kans* (Chandran and Gadgil, 1993a). In much of India, forests gave way to plantations of coffee and tea, and after 1900, rubber. These caused major changes in the landscape of other parts of South India, but were less important in Uttara Kannada.

The colonial power's interests lay in taking over as much of the country's resources as possible, and the British attempted to control forest use. In 1864 the Forest Department was created to supervise management on behalf of the state, and Dietrich Brandis, who had been educated in scientific forestry in Germany, was appointed Inspector-General. The Indian Forest Act of 1865, amended in 1878, asserted British ownership of virtually all Indian forest resources. "Reserved" forests were closed to all uses except those planned by the state, principally timber production. By the turn of the century, working plans were initiated for their controlled exploitation, and lip service was given to the principles of sustainable harvest (Buchy, 1993: 141). "Protected" forests could be used for small timber, fuel, grazing, leaf manure and other needs of the rural population. Village forests or other special categories were allowed, although not often actually designated. Local people were allowed to meet subsistence requirements from "minor" forests, a category of reserved forests where they could collect dead wood and leaves and graze cattle, but without formal rights. Communities were deprived of power to keep others out of protected forests, including sacred groves, or to regulate harvests by their own members. Thus formerly communal property became open-access resources liable to exhaustive usage, a classic case of "the tragedy of the commons". This gave the Forest Department an excuse to rescind the designation of the majority of minor forests. In Uttara Kannada, since spice gardens were economically important, the state allotted sections of protected forest, called *soppinabetta*, exclusively to them mainly as sources of leaf manure in the ratio of 9 acres of forest per acre of spice garden. Some

of these were *kans*.

Brandis (1897) noticed the widespread occurrence of the groves, and called them "the traditional form of forest preservation": "Very little has been published regarding sacred groves in India, but they are, or rather were, very numerous. I have found them in nearly all provinces ... These sacred forests, as a rule, are never touched by the axe, except when wood is wanted for the repair of religious buildings." Buchanan (1870), who noted that the *kans* were sacred to the villagers, nevertheless thought they were a "contrivance" designed to prevent the government from claiming its rightful property. The state consistently refused to recognize the sacred character of the groves. Since the *kans* were among the finest examples of evergreen forest, they were often included in reserved forests. The takeover of the *kans* was followed by the introduction of a destructive contract system for exploitation of non-wood resources which replaced the village community management. As R.T. Wingate observed in 1888:

> I am still of the opinion that the system of annually selling by auction the produce of the *kans* is a pernicious one. The contractor sends forth his subordinates ... who hack about the *kans* just as they please, the pepper vines are cut down from the root, dragged from the trees and the fruits then gathered, while the cinnamon trees are all but destroyed ... I was greatly struck with the general destruction among the Kumta evergreens; they were in a far finer state of preservation fifteen years ago. (Wingate, 1888)

With the British staking a claim to all the forests, the village communities lost control over the *kans* of Uttara Kannada and nearby districts to state monopoly. Since the wood of most of the evergreen species of the groves was perishable, the state was not initially interested in timber cutting within the *kans*. However, the resource shortages faced by the common people after the forest reservations resulted in tree felling within the *kans*. Wingate alludes to the fact that a proper demarcation of the *kans* was not conducted by the government, implying that several of the *kans*, which functioned as village sacred groves cum safety forests, merged with ordinary forests and lost their identity (Chandran and Gadgil, 1993a). When severe restrictions on biomass removal from the forests were imposed on the population, heavy pressure started building up on the village *kans*. Felling opened the evergreen forest canopy and permitted the spread of introduced, light-loving weeds like *Lantana* and *Eupatorium*. Collins in 1922 noted that the village *kans* of Siddapur were infested with *Lantana*. The government allotted 769 hectares of *kans* in eastern Sirsi to the "minor forests" open to biomass exploitation by the public (Collins, 1922). Encroachment on the *kans* by land-hungry farmers reduced their area. In Sorab the town is even now expanding into the nearby *kan*.

Since the *kans* contained mostly softwoods, unmarketable at the time, little state-directed timber exploitation was carried out in them up to almost the end of the British period. The resource emergencies of the Second World War, however, were made the excuse for "war fellings" throughout the forests, including the groves. Use for dipterocarps, which survived only in *kans*, was found in the railroads and in the new plywood industry. During the 1940s, *Dipterocarpus indicus* from Katlekan in Siddapur was so used

(Shanmukhappa, 1977).

When India achieved independence in 1947, the Forest Department continued the methods of professional forestry that it had inherited, with centrally directed state management. It was a disastrous model. The government launched a major drive for industrialization that included leasing reserve forests for extraction of timber to companies producing plywood, paper, matches and packing cases (Gadgil and Chandran, 1988: 51). Other forests were submerged in hydroelectric reservoirs. These leases and projects not only superseded forest sanctuaries that had been recently created, but many *kans* as well. A forest working plan for Sirsi and Siddapur in 1966 included over 4000 hectares of *kan* groves for timber exploitation by forest based industries, and is one example of many such (Shanmukhappa, 1966). Another working plan for Sirsi included the *kans* of 10 villages totaling an area of 672 hectares for selection felling (Thippeswami, 1963). Working plans often included "improvement felling" in *kans* because the magnificent old trees were regarded by foresters as "overmature" specimens impeding the more rapid growth of younger trees. This was not the only form of destruction, however. A *kan* was clearcut and converted into a eucalyptus plantation in Menasi village of Siddapur taluk. During 1976, despite protests from the local community, the *kans* of Muroor-Kallabbe village forest panchayat, which the people had preserved in an excellent state, were leased to a plywood company which extracted hundreds of logs, creating enormous collateral damage. Due to a long series of such invasions, the area covered by *kans* in Siddapur taluk declined by 94.9 percent, from an estimated original 5.85 percent of the total land and water area to 0.3 percent. To add insult to injury, sacred ponds were poisoned to kill their native fish, and restocked with carp.

Exclusion of local residents from the reserved forests and attempts to end shifting cultivation and grazing were seen as attacks on the community-based system of use, and provoked the first case of forest resistance in the district in 1886. Agitation on behalf of the ancestral rights of forest use continued in the 1920s, and was coopted into the Gandhian *Satyagrahas* of the 1930s. In a few cases, they became rallying points in movements for local rights. A demonstration against deforestation and commercialization of the forests called *Appiko* began near Salkani, "goddess forest" (Seabrook, 1995: 65).

> Inspired by Chipko [the 'tree-hugging' movement in the Himalayas], in August 1983 the villagers of Sirsi taluk requested the forest department not to go ahead with selection felling operations ... When their requests were unheeded, villagers marched into the forest and physically prevented the felling from continuing. They also extracted an oath from the loggers (on the local forest deity) to the effect that they would not destroy trees in that forest. (Gadgil and Guha, 1992: 224)

Prospects for the Preservation of Sacred Groves

These local events in India gain wider significance when they are seen in relationship to the historical persistence of sacred groves and their cultural

and geographical extent. The practice of designating and honoring sacred groves occurred for similar purposes in widespread parts of the world. This practice was part of a pattern that helped to make possible a sustainable way of life within forest ecosystems. The positive function has not disappeared; indeed, it is more important today. Certain areas have been protected by national laws and international agreements as biosphere reserves, making them modern equivalents of ancient sacred groves. Places where ecosystems are relatively complete are "holy" in the sense of possessing integrity, or natural wholeness, and are all the more valuable because so many former sacred groves are gone.

Sacred groves, wherever they still exist, as in India, should be preserved and restored for many reasons, including their value as historical evidence for the relationship of human beings to nature. But the people of the local rural and tribal communities in Uttara Kannada once protected the groves as fragments of living ecosystems, and can do so again if they are respected as partners in the conservation effort (Daniels et al., 1993: 131). Indeed, villagers will actively protect the groves when they are given the opportunity to do so. With minimal financial aid from outside, the people of Mattigar recently fenced their grove to exclude grazing animals and prevent the damage they were doing to the foliage. To quote Madhav Gadgil (1992: 268):

> For local people, degradation of natural resources is a genuine hardship, and of all the people and groups who compose the Indian society they are the most likely to be motivated to take good care of the landscape and ecosystems on which they depend. The many traditions of nature conservation that are still practiced could form a basis for a viable strategy of biodiversity conservation.

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