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Siruvattukadu Kombai: A Conservation Strategy in the Western Ghats and Palni Hills

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TAMILNADU, India

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"...where this cursed modern civilization has not reached, India remains as it was before. The inhabitants of that part of India will very properly laugh at your new-fangled notions. The English do not rule over them, nor will you ever rule over them Those in whose name we speak we do not know, nor do they know us. I would certainly advise you and those like you who love the motherland to go into the interior that has yet been not polluted by the railways and to live there for six months; you might then be patriotic ..."

Mahatma Gandhi wrote this in 1909 to defend Home Rule and to criticize modern civilization. I agree. There is just something about living in a rural village enclosed by a thick forest that pierces the heart and makes one yearn for and reflect on an India that is vanishing.

The past five months I have based myself in Kodaikanal. This summer resort in the Palni Hills is a far cry from the interior that Gandhi described. The village where I have been conducting my research, however, still holds many of the attributes of Gandhi's interior village. Kombai is not polluted by railways, diesel-powered scooters or electronic media. The villagers are poor, but I cannot state with certainty that they have been "dissuaded [as their ancestors] from luxuries and pleasures." To facilitate the marketing of their agricultural produce, villagers request that a proper road be built connecting their settlement to the main road. Women want electric power to replace their manual bucket method for collecting drinking water out of the main well with a pump. Furthermore, they think it would be nice to hang a light bulb by a colorfully encased wire over the stove so they can see better while cooking meals at night. Dim flashlights, kerosene lamps that emit a smoke as toxic-smelling and thick as burning automobile tires, or the cooking fire itself illuminate one-room huts at night. You will not find a school, immediate health-care or credit facility, running water (in our Western-faucet sense), a powered sewing machine, gas stove, pillow and mattress or sanitation in Kombai.

The villagers' requests for a road and electricity are complicated by the fact that their settlement is located within a government-managed Reserved Forest. Despite well-known corruption within the Forest Department, civil servants working in the area doubt that electricity will be installed. To do so would mean clearing forest for non-forestry purposes — an activity that is strictly forbidden, they say. Without receiving permission from the Forest Department, someone (villagers claim that it was local Forest Department offi-

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cials) already has constructed a lorry-wide road into Kombai. The slopes leading into and surrounding Kombai are too steep for roads and mechanized logging. The road is a boulder field carved up by soil-eroding gullies. Neither a four-wheeled-drive vehicle nor a lorry can successfully enter the settlement. Even pack horses have a difficult time picking their way through.

When I heard people requesting such infrastructure, I asked myself if these desires are in fact the "pleasures and luxuries" that Gandhi claimed were destroying India. As I sat on the stairs of the elevated A-frame bamboo hut where I lived during my field work, I often thought that in many ways Kombai is a terrific place just the way it is. As if I know best; the truth is I suffer from "idyllic-village" syndrome.

The silence of Kombai is striking. An axe chops wood. Chickens scratch the hardened soil through a layer of dried and crumpled leaf litter. A dog growls at a passerby who approaches too close to its domain. Screeching tropical birds glide overhead. The hooves of hobbled horses strike the ground with a dull thud. They struggle to graze. Three of their four legs are tied together to restrict their grazing area. These are the sounds that slice through the humidity in the air.

My virus is short-lived. The reality was I struggled along with everyone else when I hoisted up four buckets of water from the common well to fill another larger pail for my daily bath. I was lucky. The well water is for drinking and watering the seedlings at the local bee nursery. No one uses this water for bathing except for me. Everyone bathes with the water buffaloes in the foul-smelling, less-than-ankle-deep river that flows through the village. I was grateful to be granted clean water. I too had to haul four weeks' worth of rice, oil, tea, sugar, salt, flour, vegetables and *dhal* for over an hour in the mid-day sun. The sweat stung my eyes. My back ached for days. I think I would have done just about anything for a vehicle at the time.

I knew I did not have to live in Kombai forever. I knew that the sore back I woke up with in the morning from sleeping on the hard floor would go away once I sank into my mattress back in my Kodai bungalow. Agricultural labor is difficult. The midday sun is scorching. Unless you win one of the many daily lotteries the prospect of getting ahead, financially at least, is bleak. It is unlikely that children will attend secondary school for at least another two generations. Everyone recognizes, however, that life is better here than it is in any of the district's shanty towns along the railway tracks. In Kombai there is a cool breeze, grass and vegetable gardens, privacy if one wants it, and a clear midnight sky full of stars. I may find many of the particulars of village life idyllic, but I cannot stop the change that people desire. Part of my aspiration as an environmental and natural resource manager is to con-

sider what options for "appropriate" change exist regardless of whether that change is to conserve or to convert. Above all I try to remain realistic and constantly remind myself to be objective. I recognize that "anyone who studies village life is bound to be influenced by his own personal ink interests and cultural values" (Critchfield, 1981).

As my time in the Plan Hills comes to an end, I consider this newsletter an exercise to put into perspective the work that I have done and what I foresee as the future threats and obstacles to forest conservation in Kombai. If the Palni Hills Conservation Council (PHCC) lobbies the Tamilnadu government successfully, then Kombai and its surroundings will be designated, managed, and protected as a wildlife sanctuary. Protected areas must fulfill the aspirations of those living within and around them. Compromise, appropriate alternatives, and continuous communication with residents may fulfill both their desires for a road and electricity.

Western Ghats and the Palni Hills of Tamilnadu

Tamilnadu lies southeast of the Deccan plateau that ends in Karnataka. The waters of the Bay of Bengal crash on its eastern shore and the waters of the Indian Ocean on its southern shore. The chain of mountains known as the Western Ghats gently bend from the north to the southeast and run parallel to the Arabian Sea extending from Maharashtra to the very tip of India in Tamilnadu (Figure 1, page 3).

The historian Subrahmanian (1973) writes that the hills (Western Ghats) of Tamilnadu existed millions of years before the Gangetic valley and the Himalaya took their present shape. To put this in historical perspective, the fault plains of the Nilgiri hills in Tamilnadu (NW of the Palnis) suggest that substantial tectonic activity took place in the region in the late Jurassic period (160-210 million years ago). Their seniority bestows neither the prestige nor the international recognition received by their northern Himalayan cousins (60 million years ago).

Certain habitat types containing endemic species and Pleistocene refugia remain poorly represented in South and South-East Asian regional conservation strategies. India is one of a dozen countries considered "megadiversity countries." Megadiversity countries are those nations that account for a high percentage of the world's biodiversity. This status is based on the total number of species and the levels of endemism contained within nation-state boundaries (McNeeley et al., 1990). According to the *Indo-Malayan Review* (MacKinnon and MacKinnon, 1986), the Western Ghats is one of nine major gaps in the protected area system of the entire region. (Another region is the Himalayan region of Bhutan where I spent the earlier part of my fellowship.) Scientists and

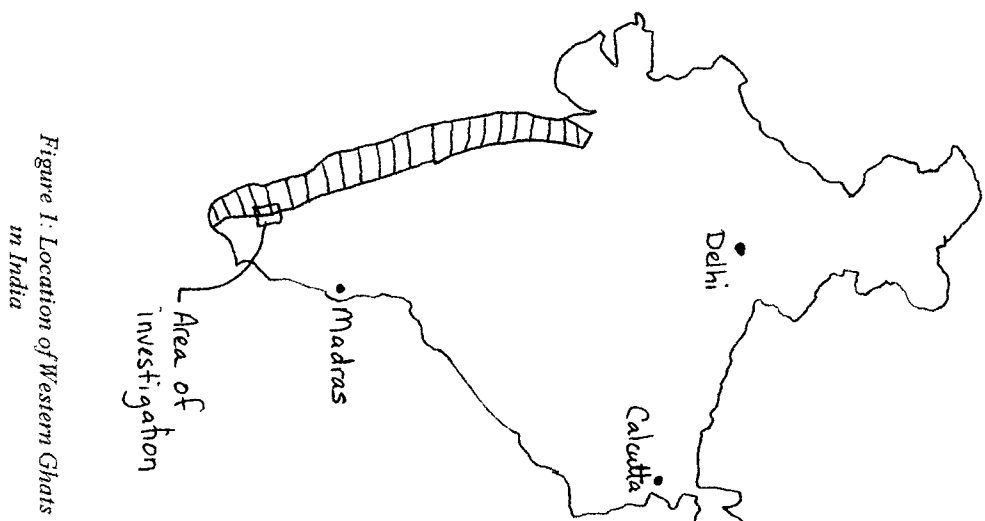


Figure 1: Location of Western Ghats in India

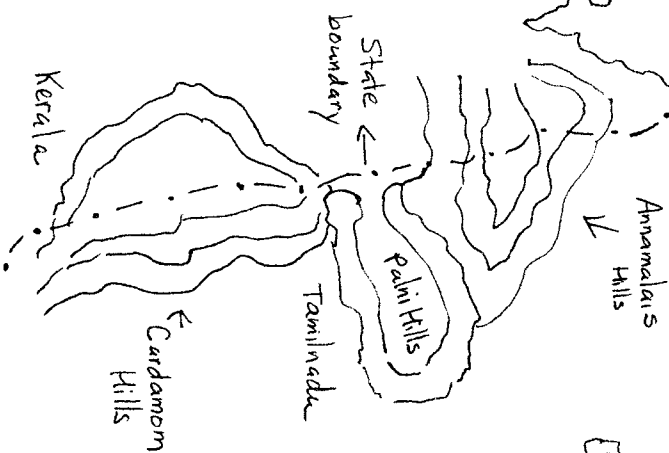


Figure 2: Location of Palni Hills in relation to other ranges in Tamilnadu

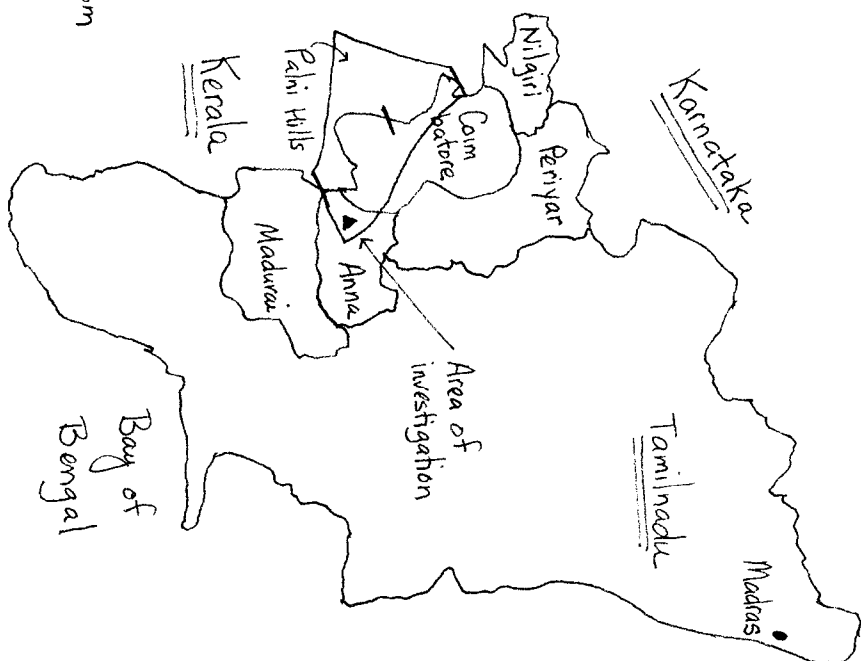


Figure 3: Districts of Tamilnadu falling within or bordering the Palnis

naturalists in South and West India would be delighted if the international agencies and government ministries in New Delhi shifted some of their focus and their funding from the Himalaya to the Western Ghats.

B.H. Baden-Powell described the Western Ghats of southern India in 1892 as lofty and clothed with evergreen forest. "This country is undulating, composed of laterite ridges intersected by the deep-soiled valleys of the streams coming down from the hills... Above, rise the main slopes of the Ghats with dense evergreen forest on the ridge" (Pouchepadass, 1995)).

Through remote sensing from satellite (LANDSAT) imagery, scientists estimate that during the ten-year period 1972-1982, 190,000 km² of forest cover in the Western Ghat states of Tamilnadu, Kerala, Karnataka and Maharashtra were cut-over. Approximately one-half of Tamilnadu's forest cover is found in the Western Ghats. Madhavan Unni and Naidu (1988) found that during this same decade Tamilnadu lost approximately 4048 km² of forest cover. These same technicians conducted a separate case study of the 1100 km² Kodaikanal region. During the next five years (1982-1987), 9 km² of forest was converted into shrub land or agriculture. Fourteen square kilometers of natural grassland was re-planted with plantation species such as eucalyptus and wattle. Changes in land use are no less threatening to ecosystem integrity and biodiversity than deforestation.

The 87-kilometers-long and 24-kilometers-wide Palnis cover an area of 2400 km² and range in altitude from 300 to 2500 meters. Their western border is contiguous with the border of Kerala. For a few kilometers along the northern slopes, the Palnis share a common border with the Annamalai Wildlife Sanctuary of Tamilnadu's Annamalai range (Figures 2 and 3).

Palni derives its name from the pilgrim town called Palani that lies just to its north. In ancient Sanskrit the hills are referred to as the *Varahagiris* or "pig-hills." According to legend 12 children in the area poked fun at a *rishi* (a holy Hindu saint or inspired poet) living in the forest. In his anger the *rishi* transformed them all into pigs. Lord Shiva rescued the children, restored them to their natural form and installed them as kings in the plains of Tamilnadu. The Tamil equivalent of "pig-hills" is *Panri-malai*. Palani or Palni is thought to be a corrupted version. The British often referred to the territory as the Pulney Hills.

The Palnis are divided along an east-west axis that stratifies them into two distinct elevational areas: the upper Palnis and the lower Palnis. The lower Palnis range in height from 300m to 1500m. Characterized as a "confused jumble of peaks" it was here in 1846 that M. Emile de Fondclair first planted coffee. The area is prime agricultural land for other crops including paddy, turmeric, ginger, cardamom, tamarind,

mango, orange, and lime. The Kunnnavans were the principal land owners, the Pulaiyars the principle laboring caste. The British did not consider the inhabitants here as hillmen "in the strict sense of the word."

The upper Palnis range in elevation from 1500m to 2500m. American and British missionaries established Kodaikanal on a plateau of coarse grass overlooking the Palnis' southern edge. At these higher elevations ravines and valleys were fewer, forest cover thicker, and the climate colder. As on the lower slopes the population was mainly comprised of Kunnnavans with a "few of the wild Paliyans." The principal crops included barley, wheat, garlic, coffee, and rice.

There are two hilly areas of Tamilnadu considered to be of extreme botanical importance: the Palnis (which includes both Kodaikanal and Kombai) and the Sirumalais of Madurai district. One of the earliest botanical explorers of the Palnis was Dr. Robert Wright in 1836. He wrote:

"In the course of about 15 days, I collected little short of 500 species of plants, and without any attempt on my part to preserve specimens of all the plants in flower or fruits in this season, many being rejected merely because I was not in want of specimens. It did not, in short, occur to me at this time, which it has since, to compare the vegetable production of these hills with the recorded ones of the country generally ... as I think, were a somewhat perfect collection formed, it would be found to contain a number of species amounting to one half to four-fifths of the whole peninsula flora, as far as we are yet acquainted with it, and to present a vast number of species peculiar to themselves" (in *Viraraghavan*, 1988).

Less than 15 years later another botanist listed over 700 species from the Palnis, excluding grasses. In succeeding decades, floral enthusiasts would document 4 new genera, 95 new species, 15 new varieties of grass and 19 endemic flowering plants. This genetic diversity was and continues to be threatened by the introduction of exotic-species plantations and the poaching of valuable hardwoods such as teak, rosewood, sandalwood and ebony. The Indian ecologist B.B. Vohra declared, "After Independence, formidable mafia based on the triangular alliance between the corrupt bureaucrat, the corrupt politician and the corrupt businessman emerged in all states, and became a most powerful threat to the conservation of the country's tree cover" (*ibid*).

Forest management in the Palni Hills falls under the jurisdiction of officials in Kodaikanal and Dindigul taluk (A taluk is a small administrative unit of a district) of Anna district. Over the last 120 years, approximately 55% of the Palnis' natural vegetation has been converted into commercial plantations of

blue gum, pine, wattle and coffee. Of the remaining 45%, a large portion is managed by the state as Reserved Forest. Other patches of natural vegetation are small, often degraded and isolated within an artificial landscape.

Protecting the native vegetation and conserving forest cover is not new to the Palnis. The British implemented "conservation-oriented" policies to put forth their own agenda. Their first "conservation initiatives" began in 1852 with the requirement of permits to fell timber. Prior to this anyone was allowed to fell timber anywhere without restriction. In 1854 new laws again changed access to the Palnis' forest resources for both British timber merchants and the residents of her forests.

Hill people were forbidden to collect honey, gums, resins and other forest products that they were accustomed to collecting for both themselves and the forest department. A substantial conflict arose over banning the collection of gall nuts (fruits of *Terminalia chebula*) for the tanning industry. (Although by 1914 gall nut was replaced by the chrome process of tanning which reduced the income generated per annum from Rs.15,000 to Rs.2,000.) The loss of this revenue forced forestry staff to charge for the initially-free timber-felling permits. The most valuable native forest tree species are teak (*Tectona grandis*), rosewood (*Dalbergia latifolia*), red cedar (*Cedrella toona*), *Pterocarpus marsupium*, and *Vitex altissima*. The expansion of the Empire in India was based to a large extent on the revenue generated by and the infrastructure established through these species (Francis, 1906; Gadgil and Guha, 1993).

In 1856 the administration forbade plantain (a banana-like, starchy fruit) cultivation in the Lower Palnis. British forestry officers disliked this practice, a form of slash-and-burn agriculture, because "the abandoned clearings hardly ever produced good forest again." The British viewed this indigenous form of cultivation, known as *kumri*, as "... one [of] so wasteful and improvident a nature that ... it ought not to be tolerated except in a very wild and unpeopled country." The *kumri* cultivator was considered the one who "recklessly felled and burned [the forest] for the purpose of obtaining one or two scanty crops of dry grain" (Pouchepadass, 1995:132). Banning *kumri* cultivation was for the good of the people. "It appears certainly to retard the improvement of the forest races." Placing the *kumri* cultivator under the yoke of settled agriculture would undoubtedly make him "more civilized." Were the hazards of *kumri* cultivation really impoverishment, backwardness, flooding, climate change and decreased soil fertility as the British asserted? Or were they really the increased frustration associated with less control over the "shifting forest-dwelling natives," the loss of land-based tax revenue and the threats to the valuable raw material for ship building in Madras and Bombay and the ex-

panding railway system? In the Palnis, taxes were collected on every hoe, plow and hatchet. Land cultivated by hoes was taxed higher than land cultivated by a plow. This reinforced the British desire to tame the hill people and further discouraged plantain and *kumri* cultivation which was hoe cultivation.

The British formally stated that in the upper Palnis there were "wide extents of land over which the hilt folk have no rights of occupation..." (Francis, 1914). In 1860, two peons were assigned to patrol the Palnis, one to the lower range and one to the upper range, at a rate of Rs.5 per month (In today's currency this is equivalent to \$US0.15 or the price of two mangoes, one AA battery, or one cup of South Indian coffee in a fancy restaurant. No doubt this was a fortune 135 years ago.) The duties of these early "beat officers" were to enforce rules against *kumri* cultivation, collection of certain forest products, and felling trees without timber permits. It is doubtful whether two beat officers roaming the Palnis could have made much of a difference to forest conservation or amassing the Presidency's wealth. What remains largely undocumented are the social relations between these beat officers and forest-dwelling peoples. At the local level these government-employed and therefore "powerful" peons could have had a significant impact on the wealth of the household or an entire village.

The year 1882 saw the passing of the Madras Forest Act. One segment of this legislation categorized the forested areas of the Madras Presidency (present day Tamilnadu and some areas of the neighboring states of Kerala and Andhra Pradesh) into the management units of Reserved Forest and Village Forest. The latter were to be managed by local residents for their daily needs. The rights of local people to collect fuelwood, construction poles and fodder were restricted in Reserved Forests by the Indian Forest Act of 1927. Not until 1988 were these basic needs legally re-established through the Forest Conservation Act.

The Forest Department still controls trade in minor forest products. Private contracts are becoming more popular and are issued for the nuts and fruits most prized and demanded by local industry. Villagers and tribals still are exploited for meager daily wages in collecting them.

Despite a shrinking habitat in both the Western Ghats and Palnis, wildlife is still abundant; although wild elephants are no longer found "as far east as Kannivadi zaminadri" (See below). Most of the 200 bird species in the Palnis are endemic to its shola (montane) forests. Elephants ignore state boundaries and migrate through corridors in the Palnis to adjacent wildlife sanctuaries. Other endangered species include the Nilgiri tahr, an endemic goat, Nilgiri langur, and leopard. Guar, barking deer, mouse deer,

sambar deer, civets, jackal, sloth bear, wild boar and seven species of squirrel are commonly sighted by villagers and less often seen by tourists. People claim livestock fall prey to tigers. There has been no confirmed sighting of this majestic cat. Wildlife ecologists believe that leopards (*Panthera pardus*) are the actual predators that cause such damage.

Research site history and description of Kombai

The northeastern Palni slopes fall between 77°36'E to 77°44'E and 10°21'N to 10°25'30' N. My research in the Siruvattukadu-Parapalar watershed covered a 4570-hectare area. The Forest Department manages 3757 hectares of this as Reserved Forest. Local farmers and absentee landholders cultivate the remaining 813 hectares in lime, orange and coffee plantations. Approximately 70% of the area is under forest cover. A mosaic of dry and moist deciduous forest species covers 50% of the area; evergreen trees cover the remaining 20%.

Before the turn of the century, the north-eastern forests of the Palni Hills were known as "vadakadu," which in Tamil means 'northern forest.' The forests were under the control of *zamindars*, large landowners who collected taxes for local chieftains and later for the British. The forests of present day Kombai were under the control of the zamindars of Oddanchatram and Kannivadi. The zamindar of Kannivadi owned his "estate" until 1863 when he was forced into bankruptcy and began to lease out his land (Francis, 1906). The Forest Department employed local people to procure forest products for the state's industrial consumption. Paliyans, an indigenous food-gathering society, freely roamed the hills.

Village establishment and agricultural cultivation began in Vadakadu in 1901. These settlements included Palkadai, Vadakadu, and Siruvattukadu Kombai. The British granted *patta* (legal title) to 300 acres in Vadakadu, but I was unable to find out who held these titles. The natural supposition that *patta* were issued to the first residents is belied by the fact that the records show that people issued *patta* visited the area only twice a year. Landowners practiced rainfed agriculture, cultivating pulses and grains. The only visits made to the land occurred during the sowing and harvesting seasons. Most likely these right-holders lived on the plains and hired other people to manage their fields.

The Pulaiyars, an agricultural laboring caste, are believed to be the first inhabitants of the Palni Hills. Supposedly, they encroached on *patta* land once the landholders left. As the area's original inhabitants, perhaps the Pulaiyars were displaced by the British or the zamindars or both, in which case their "encroachment" can be seen as their way of reasserting their traditional rights. Perhaps the Pulaiyars were opportunists who felt they could manage the "abandoned"

land better and in their own interest after the "legal" *patta* holders returned to their native places.

Historical accounts detail only the Pulaiyar process of cutting trees for producing charcoal and claim that they are responsible for early deforestation on the northeastern slopes. But, missionaries (encouraged by the British) likewise share the blame for deforestation: The British granted missionaries *coupe*, a title to clear-cut forest for plantation establishment. Obviously, plantations generated revenue for the Commonwealth, but what did converters of souls know about conversion of land, or did that even matter? Yet the tribals (presumably the Paliyans and Pulaiyars as they are the only tribals in the Palnis) are faulted again for destructive practices since they were employed by missionaries as tree fellers.

The first written account of a foreigner visiting Kombai was recorded in 1909. Mr. Peartchell overstayed a hunting excursion in Kombai, cleared 12 cents (a little over 1/10 of an acre) and built a school. No physical evidence of the school located southeast of present-day Araliparai remains. Peartchell continued to cut back the forest and established the Marumalai Coffee Estate. By the end of 1915, the area was surveyed and mapped by the Forest Department, and the majority of the residents including Mr. Peartchell issued *patta* for land cleared and occupied. It is unclear what happened to these cultivators between 1915 and 1950.

Today there are three villages in Kombai (Figure 4). Puliyangasam and the Shed Forest settlement were built as part of a tribal relocation scheme in the early 1950's. According to the settlers, though, their new homes and *patta* to their own agricultural land were not granted by the grace and benevolence of the State, but rather by one individual, a man named K.C. Mannadiyar. While I was trying to establish Kombai's history from interviews with village elders, Mannadiyar was always mentioned. Historical accounts vary slightly, but several facts remain consistent and many of the life histories of these "first" occupants are remarkably similar. I do not know where Mannadiyar was born or his occupation. For reasons I cannot yet explain it appears that during the years 1952-1953, Mannadiyar negotiated and received a land grant (including the treasured *patta*) for 153 acres from the Tamilnadu government. He divided the area into individual three-acre plots and distributed them among Pulaiyar tribals working as daily laborers on a nearby coffee estate. Pulaiyars left the estate and moved to Kombai to try their skill at farming. Mannadiyar is described as a bold but simple man. So simple in fact that he did not even carry an umbrella in the rain. When he died, all the people in the area went to his cremation to honor him. "He was healthyminded," I was told. "Too bad his son did not inherit his qualities."

The third village is Talaiyuttukadu, literally mean-

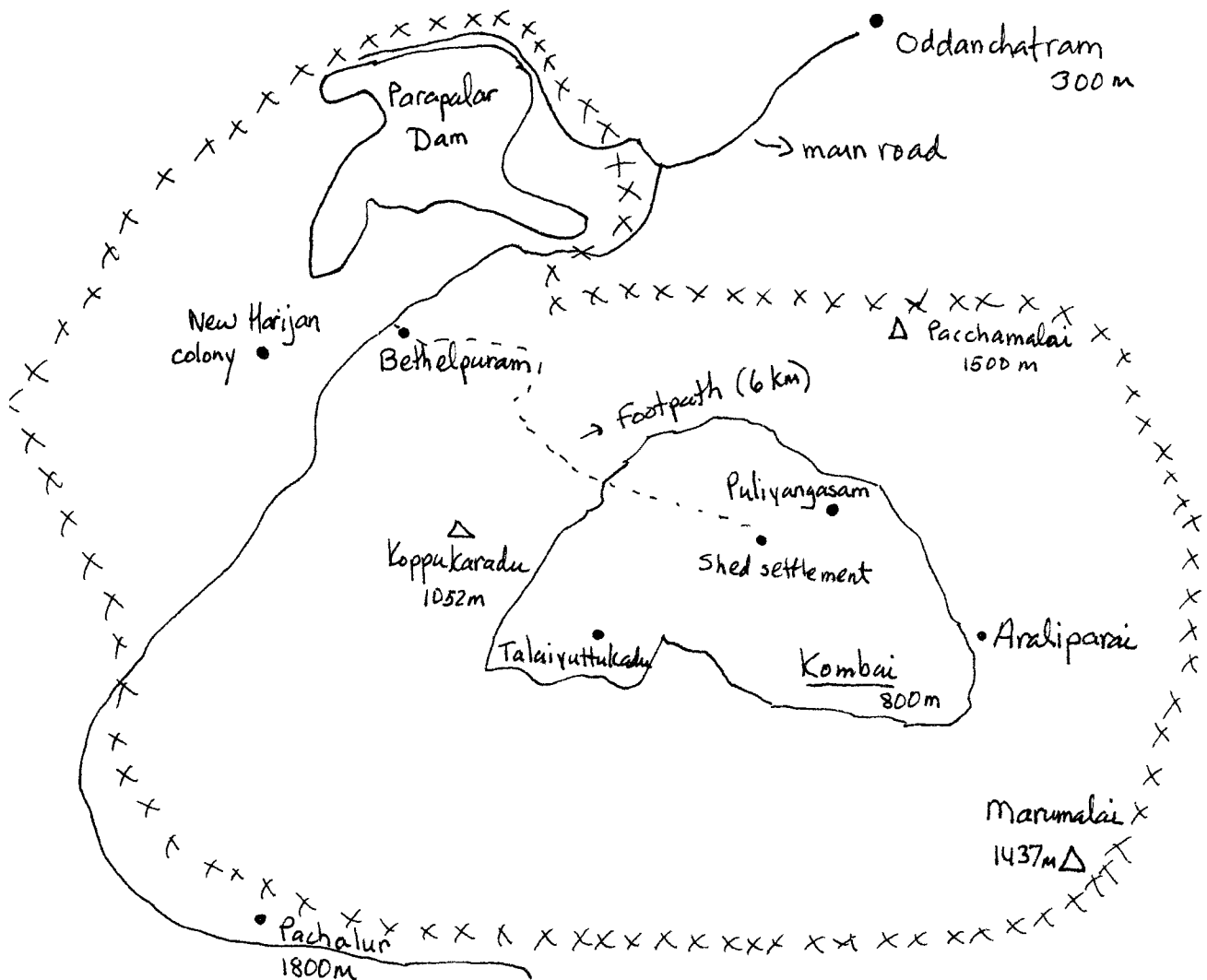


Figure 4: Sketch map of the Siruvattukadu - Parapalar Watershed

ing, "head spring forest". I never saw a spring here. The huts are all occupied by Paliyans. Sometime during the 1950's (after the Pulaiyars' arrival), the government resettled them here without issuing *patta*. Today Paliyans do not cultivate food or vegetable crops. They only graze buffalo and work as coolies. In the late 1970's, work began on the Parapalar Dam and the road connecting Oddanchatram and Pachalur was completed.

Present day Kombai

In 1993 there were 111 households and a total population of 485 individuals in Kombai. Castes among

the residents range from the lowest possible, scheduled tribes, and climb as high as backward caste members, one rung below the reverent Brahmin. Occupations range from shop keepers, farmers, and basket weavers to daily-wage farmers orchard caretakers, nontimber forest produce collectors and the occasional odd-job workers.

The Tamilnadu Forest Department controls most of the extraction and sale of 34 different nontimber forest products. Private contractors bid on and control a small sector of the commercial trade in six forest products, including bamboo stems for basket weaving, the edible fruits of the tamarind tree and

the cotton-like fibers found within the fruits of the silk cotton tree. The collection of forest products generates sporadic employment throughout the year.

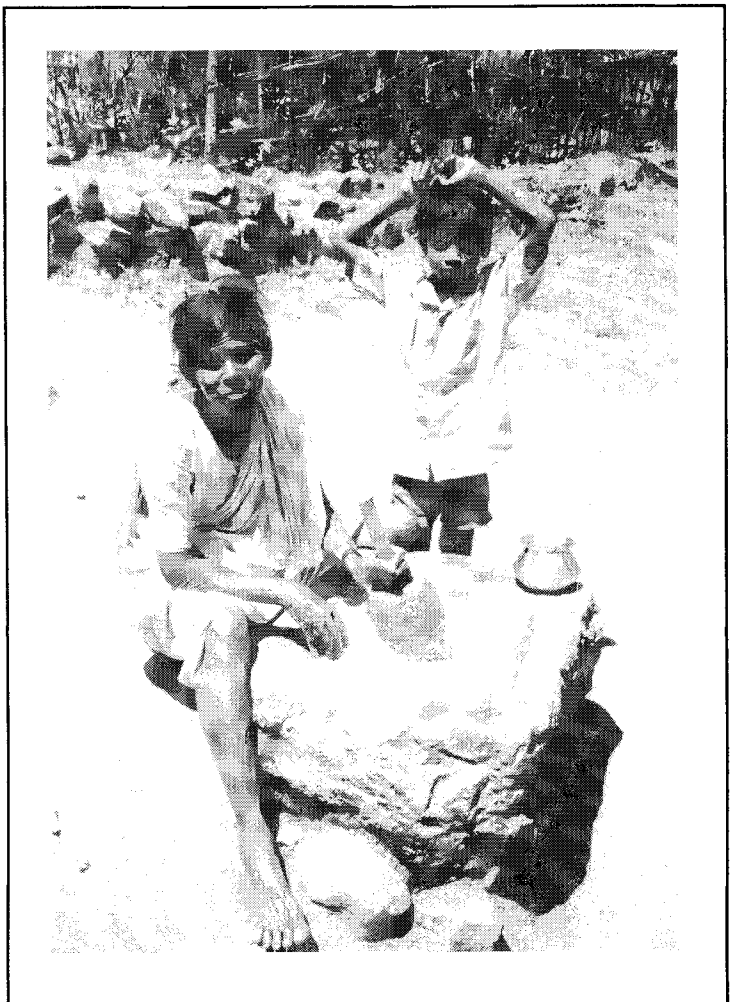
While Kombai is remote, its sheltering hills do not keep out showers of foreign and other types of external aid. In the late 1970's, a West German-based Christian organization secured housing loans for the Pulaiyars in the Shed settlement. All families who participated in the scheme now reside in identical one-room mud huts with cement foundations, two diamond-patterned lattice-work windows and covered verandahs. Sturdy homes such as these are always referred to as "pukka", a Sanskrit word meaning correct. One of the greatest compliments you can pay someone is to remark on their "pukka verdu," their correctly built home. The underside of the red-ceramic roofing tiles reads, "Latest Model. Approved by Govt. of India." Inset near the door of every freshly white-washed home built by the project is a black marble plaque engraved with the following:

*Glory of God
Tamilnadu Christian Council
Economic Life Committee
Housing Programme
Sponsored by
Central Agency
West Germany, 1978*

Every family in the settlement has carefully covered this inscription with thick white paste. The black tablet detracts from the house's crisp, clean look. It took me quite some time to convince one woman to scrape away the whitewash so I could read what was written beneath.

The Paliyan families living in Puliyangasam reside in one-room mud houses with either grass thatch or ceramic tile roofing. In Talaiyuttukadu the majority of the Paliyans live in low-to-the-ground huts of woven palm fronds with bundles of dried grass filling the intermittent holes. One elderly woman told me that her ancestors were coolie laborers during the agricultural season. In the off season, they would go into the forest for months at a time to dig roots, to hunt and to collect honey. This woman claimed that the Pulaiyars are the real tribals because they received land from the government, whereas the Paliyans have a slightly higher rank. Her superior attitude does not restrain her from participating in religious festivals with Pulaiyars. I had the opportunity to become absorbed in the delights of one of Kombai's two most important religious festivals.

Colonial records document Paliyans and Pulaiy-



All grains are pounded and ground by hand. This woman is grinding fermented rice to make a steamed cake called idli.

ars worshipping their own gods and local deities, not those of the Hindu Tamils living on the plains. In past decades, worshipping the gods of the Hindu pantheon has become more prevalent. The most popular deity among Kombai's residents is Lord Murugan. Murugan is one of the most ancient Tamil gods. In North India Murugan is known as Subrahmanian. He is the second son of Lord Shiva (God of mystical stillness) and his beautiful wife, Parvati, the Mother Goddess. Murugan is a mountain god (In her benevolent form, his mother is often referred to as Daughter of the Mountain). During Murugan's dark phases he is armed with a spear and joins his mother, who is then the terrible war-goddess Korraivai, on the battlefield dancing among and consuming the flesh of the slain. Gods are identified by their weapons; Murugan by his spear; his father, Shiva by a trident (Basham, 1967).

A month of Murugan worship began at the beginning of April, but the preparation for the annual pilgrimage to Murugan's temple in Palani began at the beginning of March. When I first arrived in Kombai, only older men were wearing the traditional *lungi*, an



Houses built with West German assistance

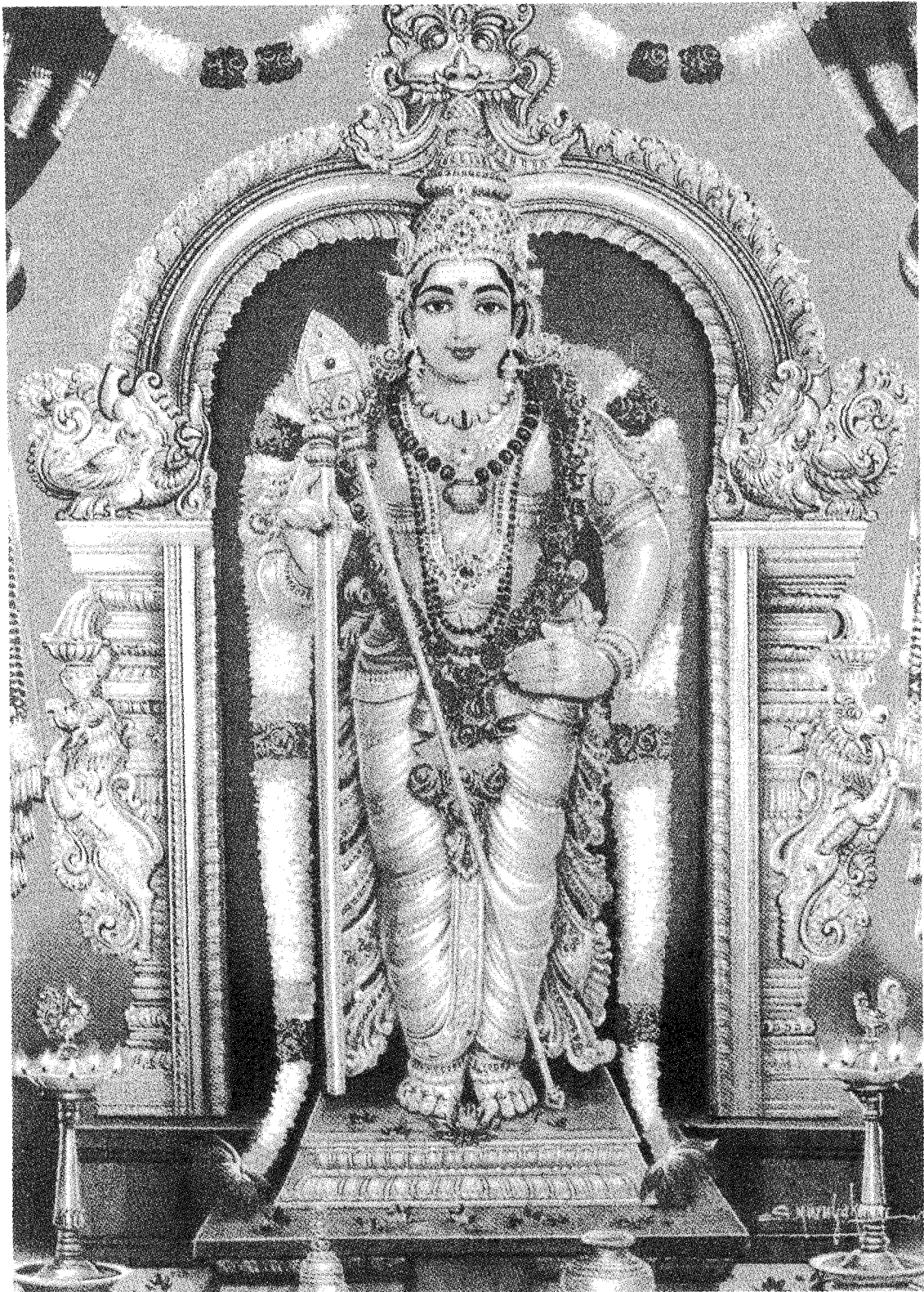
ankle-length cloth wrap in solid orange, yellow or green. This costume is the first indication that one is preparing for a pilgrimage. The towel that every Tamil man wraps around his head during the heat of the day matches the color of the lungi. A string of wooden beads adorns the devotee's neck. Every day of preparation begins with a visit to a local shrine, a pile of rocks under a tree or on top of a knoll, where gifts of coconut, bananas or limes, flowers and words are offered to the gods. The supplication ends with the smearing of bright yellow sandalwood paste across the entire width of the forehead.

As the days of early March pass, the number of men and eventually women wrapping themselves in solitary hues increases. Not until the end of the month do younger adolescent boys proudly sport wooden beads and new lungi of their own. Kuppasamy, a youth of twelve who lived in the house near mine, greeted me one morning with a mile-wide grin. It took me quite some time to figure out what this self-satisfied display was all about. Later that afternoon I caught him behind a rock fiddling shyly with the beads around his neck.

In addition to the new attire, pilgrims no matter what their age, gender or status within the village address each other as *sami*, which means god or deity in Tamil, but is also a respectful term of reference or address. Personal names are temporarily shelved. It



A typical Paliyan structure of palm fronds and grass



Lord Murugan carrying his spear, which represents the victory of good over evil. In Tamil mythology Murugan rides a peacock and is known for his short temper. He has six houses in Tamilnadu. All are in the mountains.

took me a very long time to learn individual names. I used *sami* very effectively as a crutch, although I had a difficult time keeping a straight face when I addressed mischievous kids half my age with such respect.

At the beginning of April the festivities began. There are three "Murugan" devotee groups in Kombai. Members of each group donate thirty rupees a month (US\$1) to sponsor a Murugan festival during the first 10 days of April. The monthly fee hires a troupe of dancers and acrobats from Oddanchatram, a loudspeaker, cassette tapes of Tamil film songs, a generator, two Tamil films and a movie projector. I was in Kombai for the first function. The excitement, especially among young children, was contagious. Forget the village peace and quiet. Film songs echoed off the surrounding hills for 36 continuous hours. The night before the film and dance, everyone invited me to attend.

At 8:30 P.M. a group of teen-aged girls came to my hut to escort me to the open space in Puliyangasam where the evening's events were taking place. We left, each with bed sheet in hand, but only after they

had quarreled among themselves about who was going to carry my flashlight. Someone had spread a mat under a tamarind tree. The five of us sat down, wrapped in our cotton bed sheets. Vendors who came up from the plains sold everything from peanut brittle to plastic trucks to the 200 of us present. The dancing began at 9:15 P.M. and was good fun. Men with bushy hair and spindly legs performed circular dances to drums. They beat cymbals and shook tambourines. After the dancing they cheered each other on as troupe members back-flipped the length of a nearby field, strutted in the best Michael Jackson fashion and juggled and whipped fire over and around their heads. One flying flame freed itself and ignited a nearby field. I was completely satisfied when the entertainment ended an hour later.

I was unsuccessful in excusing myself from the two films that followed. The white sheet nailed between two tree trunks that served as a screen was rippling in the blustering wind. The organizers, dissatisfied with the quality of the black and white picture, took down the sheet and hung it on the side of the community center. I do not think I lasted more than 20 minutes into the first film, a religious story about Murugan. I know for certain that I did not really sleep either, since no matter which way I flipped myself around on the mat, tree roots poked into me. Soon enough it was 4:30 A.M. and time to go home. My friends spent the next two hours with me napping sardine-style in my small quarters. By 6:30 A.M., each had gone to her own house to start her morning chores. How the film-goers functioned the next day remains a mystery to me. I was completely useless.

After the third function, the devotees travel to Palani and celebrate a *puja* to Lord Murugan. I was told that "back then," pilgrims would walk barefoot to Palani. Today people walk barefoot out to the main road and board the bus, but, I do not expect that this belittles the journey's seriousness or its purpose.

The basket weavers' donation

"Fishes can't afford to live on bad terms with the crocodiles in the pool."

A peasant farmer in Bengal. *The City of Joy.*

There are approximately 10 families in Kombai engaged full-time in basket weaving. Another 5 to 10 families participate in basket weaving as a part-time activity. These basket weavers, who continue to follow in the profession of their fathers, are members of backward castes, who migrated to Kombai from other villages in Dindigul taluk in



Basket weaving



Packing the dried fruities of the silk cotton tree

search of a new source of raw material. There are three local bamboo species used for weaving baskets. The one called *kal* (*Dendrocalamus strictus* Nees.) is the strongest. In addition to weaving small baskets for storing household and kitchen wares, weavers produce mats, winnowing pans and protective covers for tree seedlings. Small baskets are the most marketable item and sell for Rs.8 each. One weaver can earn between Rs.25-40 (US\$0.75 to \$1.33) per day. As a result of having more than two weavers per family and a ready market, basket weavers appear to have more financial stability and security than their neighbors. Most weavers market their goods directly to shop keepers and basket distributors in Oddanchatram. Their baskets are sold throughout Anna and Madurai districts. The arrival of a middleman in Kombai to procure baskets and increase transaction costs is rare.

All of the basket weavers I spoke with are not as worried about the supply of raw materials as much as they are about access to raw materials. Perhaps today and for the next few years there is enough bamboo for everyone, not just for the weaver, but for the villager who needs a roofing beam or a small construction pole. The bamboo growing along the river banks closest to the weavers' homes is not ex-

ploited. The most able-bodied boys of the household walk kilometers into the forest to cut bamboo. Gatherers claim that bamboo cut one year can be cut again from the same culm the following year.

Cutting bamboo in Kombai is illegal because the area is classified as Reserved Forest. A wildlife sanctuary proposal could come under heavy protest from this community. Generally they believe that a sanctuary would further, or perhaps more strictly, enforce restrictions on bamboo collection. I often wonder if their concern is well-founded. As just mentioned, bamboo collection is illegal. When the district forest officer or another high-ranking forestry official is scheduled to visit the area, the local forest guard warns the weavers of the inspection so they can hide their materials. For his friendly advice, the forest officer collects Rs.50 -100 (US\$1.50- \$3.00) per family per month. This is the basket weavers' donation; everyone uses the English word.

Conflicts over land and tree

I often asked the beneficiaries of Mannadiyar's gift whether their lives were better now in Kombai than they were previously on the estates. Their answers disclosed mixed emotions and the underlying tensions between family and community members. The following stories are typical of those that reflect, struggle waged by local residents over the use of land and trees.

Chellamma has lived in Kombai for over 40 years. She came to Kombai with her husband when he received three acres from Mannadiyar in 1953. The family moved from the coffee and cardamom estate. Clearing the land was extremely difficult; entire families left this new land behind and returned to the estates. Those new inhabitants who were determined to stay on the gift plots often added these relinquished plots to their own. Initially the land supported rice and a variety of grains and leguminous crops. Fifteen to twenty years ago, farmers abandoned these subsistence crops because they were continuously damaged by forest-dwelling deer and guar. Limes replaced food crops. While waiting for the trees to bear fruit, men went off to pursue work or sold part of their land to men from the plains to obtain money to feed their families.

"In comparison life was better on the estate," this frustrated, elderly woman declared. "At least then you could eat." Life was tough on the estate. The days were long and wages were low, but managers provided provisions or food subsidies. In those days, she could buy 2 kg of rice for one rupee. Now she needs at least twenty rupees (US\$0.66) a day to feed the four generations that live under her roof. This sum provides only one meal of rice a day. Feeding a family today is complicated by spiraling inflation which forces

a family to spend nearly their entire earnings on food. Chellamma's home is a household of women even though both of her sons live in Kombai. Each son works three acres of land. The youngest son gives her food, but only when he makes one of his infrequent visits home. Chellamma is too old to work at the lime plantations as her nieces and daughters occasionally do for a daily wage of fifteen rupees (US\$ 0.50). This first-time great grandmother collects the small and fragrant white flowers of the silk cotton tree, dries them in the sun and stores them by the kilogram. Each kilogram is worth six rupees (US\$ 0.18).

Another man has lost his family and his land to an elder brother. Balamurugan's parents received land in 1953. Finding it too difficult to clear away the jungle, they returned to the estate. When his parents died twenty-five years ago, his elder brother returned to Kombai to reclaim the family's three acres. After a succession of quarrels, he re-established his family's claim but refused to share any of the land with Balamurugan. Balamurugan works on one of the many lime orchards in Kombai owned by absentee landowners. For less than 75 cents a day, he weeds, applies pesticide, prunes the trees, and gathers and markets the fruits. In the past ten years, his wife has died and in a desperate attempt to provide for this three children he has sent his two daughters to a free orphanage school in Madurai. His son remains with him.

One inhabitant recalls that the years between 1953-1963 were particularly difficult due to famine on the plains. Thieves on horseback would raid Kombai's fields, break into people's homes to steal food and ambush farmers on their way to market. This hardship in addition to wildlife predation and difficulty clearing land caused settlers to seek refuge again in the hill estates. Little did they realize that this flight left their land "up for grabs." When the refugees returned, residents who had suffered through these multiple disasters refused to return the deserted land. They had begun to cultivate it as their own.

One man leased out his lime trees for 12 years for a pittance—Rs.9,000 (US\$290.00). He and several other Kombai residents work this land for Rs.25 (US\$0.81) a day. The farmer now realizes his mistake. The leaseholder earns roughly Rs.40,000 (US\$1,290) a year from the sale of limes.

A landowner can earn over Rs.100,000 (US\$3,250) a month with thirty acres of lime trees. I say landowner and not farmer because in Kombai, it is the exception rather than the rule that the farmer and the landowner are the same person. What caused the downfall of the Pulaiyars who were given the chance to be financially independent and self-supporting over forty years ago? Some farmers say trickery, others poverty, others thievery. Regardless of the cause, the effect is the same. The land was lost. You might won-

der how this could have happened considering the fact that the government granted Mannadiyar title to this land before he parceled it out.

Patta is a difficult piece of paper to acquire. This is true even if you inherit *patta* land from your father and need to transfer it into your name or pay outright for the title to your land in cold hard cash. Justice is expensive. Many farmers cannot afford to bribe the officials with enough money (the usual practice) to purchase the *patta* that is rightfully theirs. Even when successful in obtaining the title, it is only a powerful piece of paper when there is plenty of green paper behind it. The following story of a Kombai woman illustrates this point and describes the circumstances that befall many local farmers.

"My name is Natamal I think I am almost 60 years old. I have two sons and two daughters. My husband died four years ago; and I want my tree back."

Natamal who spoke these words, was born and grew up in Dindigul taluk. She is a Harijan. She described her father as "basically a slave" on agricultural lands in Oddanchatram. She began working for a farmer at the age of five, herding cattle for 50 paise a day (today equal to US\$0.01). Her parents married her off at the age of 13. She went to live with her in-laws in Dindigul and gave birth to her first child one year later. For 40 years she and her husband lived in a small earthen hut underneath a large tamarind tree in Kombai. They received *patta* for one acre that included the land the home is built on and where the tamarind tree is rooted. The *patta* is registered in her name. The trouble over the tamarind tree began three or four years ago. The sale of the tree's fruits annually earn Rs.2000 (US\$66.00). As the tree grows and matures, this revenue should increase to Rs.5000 (US\$133.00) per season.

V.M.A. Annival, a descendant of the original land giver, Mannadiyar (some say his son, others his nephew), controls six acres of lime plantation around Natamal's homestead. Through threats of physical beatings and bribes to village and district officers, he has taken over the tree and its earnings. First, Annival threatened her family through hired thugs. This proved unsuccessful as police officers defended her and allowed her to keep the tamarind fruits. Annival then took the case to the local court. He paid off the judge who overturned the *patta* and awarded the tree to him. Natamal lost Rs.200 (US\$6.50) in court fees. Her next move was to file a complaint with the executive director of village development in Dindigul who supervises the *dasidar* (land registration) section. Evidently he's on Annival's payroll too. "If you come and ask me for the tree again I will go to the police and to my supervisors," he replied, and dismissed her.

"He (Annival) is very rich and I am very poor. I am



Natamal and her youngest daughter

asking for life, but he is not ready to give life," Natamal said when I asked her for her opinion of Annival. The loss of the tree reduces the family's annual income to Rs.1500 (US\$49.00), generated solely through the sale of limes. Natamal is so upset by the loss of the tree, around which Annival has since built a fence, that she has moved to Oddanchatram to live with her daughter. Her youngest son lives in Kombai and continues the fight for the tree. Annival hires local people to collect the fruits for a daily wage. One of his employees is the husband of Munniammal the woman I hired to cook my meals during my village stay. I thought better of asking her husband what he thought about Natamal's conflict over the tamarind tree; in cases such as these a full stomach for his family is probably more important than fighting another's losing battle.

V.M.A. Annival's wrath extends beyond this one tree into the entire Kombai settlement. Annival is the largest absentee landowner in the area. He has usurped much of the land granted by his ancestor, threatening to beat those insolent enough to ask for it back. Former landowners have been reduced to laborers on their own soil. I have not had access to government land ownership records, but villagers tell me that Munnadiyar held the *patta* to 153 acres. If he

went through the process of applying for individual *patta* for each of the grantees, then he held on to these too. Perhaps he had too much faith in his descendants.

The squirrel bandwagon

The rationale, that the Palni Hills Preservation Council (PHCC) has put forth for the protection of the watershed as a wildlife sanctuary is that it is the habitat of the grizzled giant squirrel. It is quite common for conservation initiatives to rally around one particular species or unique ecosystem. There is, for example, a flying squirrel sanctuary in the state of Rajasthan. In 1994, the woolly flying squirrel was "re-discovered" in the Himalayas of Pakistan-controlled Jammu and Kashmir. The species had not been spotted by a scientist since 1924. For several years the staff of the Wildlife Conservation Society in the United States has tried to establish nature reserves to protect this region which is also home to the endangered snow leopard (NYT).

One objective for my research and stay in Kombai was to add an ecological dimension to Siruvattukadu reaching beyond protection of the squirrel. As I mentioned in my last newsletter (CMC-12), the botanical knowledge of local residents is extensive. Ethnobotanical surveys conducted with Paliyan, Pulaiyar and backward caste members found that 284 species from over 59 different plant families have local uses in witchcraft, medicine, daily meals, ritual and construction. A number of endemic timber trees were also identified. While no systematic floristic or faunal surveys have been conducted in the area, the number of different species and families represented in the ethnobotanical surveys are an initial indicator of forest floral diversity.

The forest provides refuge to a number of wildlife species. I crossed paths with several fourlegged creatures. Guar (*Bos guarus*), barking deer (*Muntiacus muntjak*), sambar deer (*Cervus unicolor*), mouse deer (*Tragulus meminna*), squirrel (*Ratufa* spp., *Funambulus* spp., and *Petaurista* spp.), wild boar (*Sus scrofa*), mongoose (*Herpestes edwardis*) and porcupine (*Hystrix indica*) make the forest their home. There are unconfirmed reports of jackal (*Canis aureus*), Indian fox (*Vulpes bengalensis*), hyena (*Hyaena hyaena*), and jungle cat (*Felis chaus*).

If this watershed and wildlife habitat are damaged, it will be most likely by outsiders (like Annival) who manipulate policies, police and politicians. Perhaps the PHCC sanctuary proposal (if it is implemented and enforced) can protect the forest and its residents from them.

The watershed is quite small compared to the usual size of a national park or wildlife sanctuary. Some government officials may not find the area worth the fi-

nancial investment involved in changing its management. The entire area is designated (notified) as Reserved Forest. In theory, it is already sufficiently protected. In order to denotify more than five acres of Reserved Forest a petition must be sent to and approved by the Prime Minister of India. Since the "center" maintains control of some of the nation's forest resources, one might think that the government holds dear its remaining biological wealth. Still there are several obstacles of a political, economic and social origin threatening conservation.

Poaching

Sandalwood and rosewood smuggling are rampant in the Palnis and nearby Nilgiri Hills. Sandal oil lures many smugglers. Coimbatore (Figure 3) is a crossroads for Tamilnadu smugglers heading for sandalwood oil extraction plants in Kerala. Considering plant locations are common knowledge, it is surprising that forest officials cannot curb the illegal trade. A recent investigation found that most of these plants are solely dependent on timber smuggled from Tamilnadu. Thirty kilograms of heartwood produces at least Rs.7,000 (US\$227.00) worth of oil. The wood can be recycled at least three times for additional oil extraction.

The Forest Department cannot cover all routes through Tamilnadu and into Kerala, but over the last two years has managed to confiscate 26 tons of sandalwood worth approximately 46 lakhs (US\$ 150,000). Unfortunately according to Tamilnadu law, sandalwood is not a "scheduled" timber. Offenders are only prosecuted if they possess at least 100 kgs. Smugglers of "scheduled" timbers such as rosewood, silver oak and teak must pay three times the value of the quantity seized or remain in custody.

Sandalwood smuggling occurs infrequently on the eastern side of the Parapalar Dam (Figure 4). Kombai residents say that whenever a tree has been poached forest officers swarm throughout the forest like bees to a hive for a 24-hour period. Otherwise, visits by forestry officials are rare. The prevalence of poaching on the eastern side of the dam is possible since the area is accessible by a paved road meant for dam maintenance and the enjoyment of city dwellers seeking picnic sites. The sandalwood mafia may be moving south from the Nilgiri to the Palnis. All of the sandalwood is gone from the Nilgiris. The new gold mine there is rosewood Rangarajan, 1995).

In May 1995 one of the most prominent sandalwood smugglers of the Tamilnadu/Kerala/Karnataka tri-state area was arrested along with two of his wives. The offender, Masanan, would carry out poaching operations dressed like a forest officer. Masanan's accomplices hide out in remote areas of the parks in the hills of Tamilnadu and Karnataka.

The Timber mafia operates throughout India. In the

northern Indian city of Haridwar, the location of Rajaji National Park, mafia members have killed six forest guards in the past year. The last victim was hacked into three pieces and thrown out onto the main road. Forest guards and beat officers who used to patrol alone and unarmed have changed their strategy. Since they have begun defending the parks natural resources in armed groups of 15 to 20 men, and when possible traveling by jeep or mini-bus, they have seized more skins and precious timber than normal.

Local Forest Department staff

Without staff (1) committed to the protection of biological diversity and, (2) cooperating with villagers in the management of local natural resources, a protected area may be losing more than words on a piece of paper and a new colorful blotch on a computer-generated map.

Considering the system of bribes that already exists in Kombai for bamboo extraction and the unofficial construction of roadway into the Reserved Forest, would it make any difference to an unchanged Forest Department staff if a new management plan caused it to control a wildlife sanctuary as well as a Reserved Forest?

Orphanages and boarding schools

Preserving local forest knowledge and folk/medicinal remedies are two arguments for promoting conservation and enhancing local social services for Kombai's residents. The incidence of sending tribal children away to the bigger cities like Madurai threatens the transfer of this indigenous knowledge. The circumstances surrounding the enrollment of tribal children from Kombai in boarding school is much different today than the rationale used by tribal groups shortly after Independence.

Shortly after Independence in 1947, local governments established boarding schools for tribal children so they could learn the dominant tongue of their native state. Schools were founded on the belief that literacy in the language of the people controlling the legal and financial structures of the State would reduce exploitation of tribal peoples by individuals or organizations with vested interests.

In Kombai the primary reason for sending children to boarding school is poverty. Families that cannot afford to feed and clothe their children send them away to Christian organizations and orphanages. Ofttimes, only one child remains at home with the parents. This also illustrates the perception of the benefits of education. Paliyans in Kombai will send their children kilometers away to boarding school but will not send their children to the evening literacy classes that the PHCC nursery manager holds three or four nights a week. How will children who spend less than two

months of the year with their parents acquire the knowledge that daily forest dependence imparts? Furthermore, will children who spend their formative years in the city with all of the convenience of modern Indian culture want to return to their ancestral villages?

The anthropologist Christoph von Furer-Haimendorf (1982) worked among the seminomadic Chenchus of Andhra Pradesh in the 1940's. He wrote that "it remains to be seen whether those Chenchus who have spent several years in boarding school will be able to readjust to the forest life of their parents. If they have lost the skill of gathering marketable forest produce or have developed wants which cannot be met from the income Chenchus derive from such produce, education may be a mixed blessing except for those young people who obtain jobs outside their traditional habitats" (p. 142-143).

In the case of hunter-gatherers in New Guinea, Jared Diamond (1993) asserts that the first generation of people who rely on employment in urban areas to earn a living rapidly develop fear of and disinterest in the forest (Austin, 1994).

The ethnobotanical trail surveys conducted earlier this year (CMC-12) were the first attempts at recording the floristic knowledge of Kombai residents. Unless the survey is completed and followed up, considerable information might be lost if it is not taught to the younger generation.

Government policy: resettlement denotification and new forest act

Forest management in Tamilnadu is steeped in controversy and hypocrisy. Jayalalitha's government wants to construct housing colonies for landless people in several Reserved Forests and develop hydroelectric projects in hill areas designated as "maximum risk landslide zones". A Harijan resettlement is already under construction in the forest along the Ghat road connecting Pachalur and Oddanchatram (Figure 4). Two rows of twenty-two identical, one-room, red-tiled houses are almost complete. I was told that when the settlers move in, they will also be given land. Considering that all of the land surrounding the site is forest, tenants will most likely fell the trees and cultivate cash crops — unless someone convinces them otherwise. The Forest Conservation Act prohibits the use of forest land for non-forestry purposes, which obviously includes house construction. Somehow Jayalalitha gets away with it.

India is being swept by a series of denotifications of forested land. In the northwestern state of Rajasthan, the state government wants to denotify as much as 3500 km² of protected forest land to free the area for mining contracts. Officials are turning to a

clause allowing denotification from the obsolete Rajasthan Forest Act of 1953.

The Narayan Sarovar sanctuary in Gujarat, the last remaining desert-thorn forest in India, was denotified in July 1993. The state government disregarded a clause in the Wildlife Protection Act (1972) stipulating that the boundaries of any protected area cannot be altered without approval from the State legislature. The state government ranked industrial economic development over the protection of its non-income-generating ecological heritage. Beneath the soil lay limestone, lignite, and bauxite deposits. Both environmentalists and industrialists filed court petitions. Industry won, initially. A cement corporation filed for and won a contract to mine limestone. Within five months the Gujarat government issued more licenses for mining, cement and power plants within and around the former protected area. Unrestricted development pumped out all of the groundwater and salinized the aquifers, thus sealing its own fate. Villagers fled their homes. Not until March 1995 did the High Court finally act upon writs filed by Delhi's Center for Environmental Law and restore the sanctuary.

The Gujarat case ended on a positive note, but only after environmental destruction was committed. The impact of the mining operations on the ecosystem is not yet known. There has yet to be a verdict in the Rajasthan case. Both these cases demonstrate the power of state governments to overturn wildlife and forest policy for short-term economic benefits. Public servants are ordering the demise of the country's biological, and unrecoverable, wealth.

Gadgil and Seshagiri Rao (1995) claim that "the State has Draconian powers to...displace poor peasants and tribals without providing alternative livelihoods." It is not unknown for the Forest Department to forbid bamboo harvesting for artisans one day and grant bamboo concessions for industry the next. There is always a good explanation. In one particular case, bamboo cutting by the J.K. Industry Central Pulp Mills was approved in a protected area since "it allows for increased sunlight for herbivorous animals" (Brijnath, 1995). Common sense tells anyone that rural artisans would have had the same effect. Furthermore, the extraction rate of an artisan community is much lower than a capital-intensive industry and their method of extraction is more "friendly." The New Forest Act proposes to fortify the State's and the Forest Department's decision-making capacity, which will further marginalize forest-dependent communities from the management of their local resources.

The Indian Forest Act has not been substantially altered since 1927. The Union Ministry of Environ-

ment and Forests drafted a proposal in 1994 titled the "Conservation of Forests and Other Ecosystems Act". The proposal is meant to replace the existing 1927 act, but policy analysts who have had the proposal "leaked" to them allege that the act reverts back to the centralized control of the British era. According to a professor at the Indian Institute of Public Administration, the bill fails to incorporate important clauses of the Forest Conservation Act in 1988 such as those that recognize the rights of rural people to extract resources such as fuelwood and fodder. If the legislation passes, forest officers will have the power to annul community and individual rights in an area if they believe that these rights are beyond the area's "carrying capacity". The government will be able to take over village-managed forests if it believes the managing body is incapable of protecting the area or following the prescribed management plan. Local people of course have no re-

course to take over a government-owned forest that is mismanaged.

While Kombai represents only a small area on the map, it is the world to its residents. Legislation passed in Delhi may not have a significant impact on the difficult-to-reach areas of the Palni Hills. However, the chance that any progress in forest management or the rights of forest residents could be reduced to nothing by the whim of a forest guard lurks behind an A4 sheet of paper.

India is one of two countries (the other is Sri Lanka) among those in the Asia-Pacific region with the strongest conservation ethic and the most developed legal and institutional framework for the conservation of biological diversity (Braatz et al, 1992). The conservation institution, however, is only as promising as its leaders and decision-makers. □

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Current Fellows & Their Activities

Bacete Bwogo. A Sudanese from the Shilluk tribe of southern Sudan, Bacete is a physician spending two and one-half years studying health-delivery systems in Costa Rica, Cuba, Kerala State (India) and the Bronx, U.S.A. Bacete did his undergraduate work at the University of Juba and received his M.D. from the University of Alexandria in Egypt. He served as a public-health officer in Port Sudan until 1990, when he moved to England to take advantage of scholarships at the London School of Economics and Oxford University. [THE AMERICAS]

Cheng Li. An Assistant Professor of Government at Hamilton College in Clinton, NY, Cheng Li is studying the growth of technocracy and its impact on the economy of the southeastern coast of China. He began his academic life by winning the equivalent of an M.D. at Jing An Medical School in Shanghai, but then did graduate work in Asian Studies and Political Science, with an M.A. from Berkeley in 1987 and a Ph.D. from Princeton in 1992. [EAST ASIA]

Adam Albion. A former research associate at the Institute for EastWest Studies at Prague in the Czech Republic, Adam is spending two years studying and writing about Turkey's regional role and growing importance as an actor in the Balkans, the Middle East and the former Soviet bloc. A Harvard graduate (1988; History), Adam has completed the first year of a two-year M. Litt. degree in Russian/East European history and languages at Oxford University. [EUROPE/RUSSIA]

Cynthia Caron. With a Masters degree in Forest Science from the Yale School of Forestry and Environment, Cynthia is spending two years in South Asia as ICWA's first John Miller Musser Memorial Forest & Society Fellow. She is studying and writing about the impact of forest-preservation projects on the lives (and land-tenure) of indigenous peoples and local farmers who live on their fringes. Her fellowship includes stays in Bhutan, India and Sri Lanka. [SOUTH ASIA/Forest & Society]

Hisham Ahmed. Born blind in the Palestinian Dheisheh Refugee Camp near Bethlehem, Hisham finished his A-levels with the fifth highest score out of 13,000 students throughout Israel. He received a B.A. in political science on a scholarship from Illinois State University and his M.A. and Ph.D. from the University of California in Santa Barbara. Back in East Jerusalem and still blind, Hisham plans to gather oral histories from a broad selection of Palestinians to produce a "Portrait of Palestine" at this crucial point in Middle Eastern history. [MIDEAST/N. AFRICA]

Sharon Griffin. A feature writer and contributing columnist on African affairs at the *San Diego Union-Tribune*, Sharon is spending two years in southern Africa studying Zulu and the KwaZulu kingdom and writing about the role of nongovernmental organizations as fulfillment centers for national needs in developing countries where governments are still feeling their way toward effective administration. She plans to travel and live in Namibia and Zimbabwe as well as South Africa. [sub-SAHARA]

Pramila Jayapal. Born in India, Pramila left when she was four and went through primary and secondary education in Indonesia. She graduated from Georgetown University in 1986 and won an M.B.A. from the Kellogg School of Management in Evanston, Illinois in 1990. She has worked as a corporate analyst for PaineWebber and an accounts manager for the world's leading producer of cardiac defibrillators, but most recently managed a \$7 million developing-country revolving-loan fund for the Program for Appropriate Technology in Health (PATH) in Seattle. Pramila is spending two years in India tracing her roots and studying social issues involving religion, the status of women, population and AIDS. [SOUTH ASIA]

William F. Foote. Formerly a financial analyst with Lehman Brothers' Emerging Markets Group, Willy Foote is examining the economic substructure of Mexico and the impact of free-market reforms on Mexico's people, society and politics. Willy holds a Bachelor's degree from Yale University (history), a Master's from the London School of Economics (Development Economics; Latin America) and studied Basque history in San Sebastian, Spain. He carried out intensive Spanish-language studies in Guatemala in 1990 and then worked as a copy editor and Reporter for the Buenos Aires Herald from 1990 to 1992. [THE AMERICAS]

Teresa C. Yates. A former member of the American Civil Liberties Union's national task force on the workplace, Teresa is spending two years in South Africa observing and reporting on the efforts of the Mandela government to reform the national land-tenure system. A Vassar graduate with a *juris doctor* from the University of Cincinnati College of Law, Teresa had an internship at the Centre for Applied Legal Studies in Johannesburg in 1991 and 1992, studying the feasibility of including social and economic rights in the new South African constitution. While with the ACLU, she also conducted a Seminar on Women in the Law at Fordham Law School in New York. [sub-SAHARA]

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