Chap IV

Caffinating the Nilgirs

(Cont)



INDIAN INSTITUTE OF SCIENCE

BANGALORE-560 012

Chapter IV: Captivating Nilgiris: (Cont)

A Flash of Gold:

The quest for gold and silver were paramount for the colonialists who went to remote corners of the world to search for it. They had been to Australia and South America to prospect for ~~Gold~~ Gold and ~~Silver~~. ~~A hundred years after the British landed in India, by 1793~~ Perhaps In the Indian subcontinent too, the British prospected for Gold. Perhaps from the 18th century onwards the British new the presence of Gold bearing rocks and gold working in the Wynaad. ~~During~~ Since the pre-Colonial period there was a thriving gold working industry along the westward flowing ~~of~~ streams of the

Nilgiri area. There were many gold working centres in the Nilambur and Wynaad areas where Mappilai ~~labour~~ crushed and washed the rocks in the streams laboriously to extract the metal. They then purified the metal by forming an alloy with mercury and smelting to obtain pure gold. This industry was nominally under the control of the jaunmis, of the area.

The British Officers ~~were aware of the glod~~ gold attempted to explore the Nilambur and Wynaad areas for gold since 1793. But it was after 1830s, that ~~Bri~~ Europeans had visited the site and reported of the Gold workings in Nilambur.

"In the Nilambur Valley, they found a regular set of mines, which shafts some 10 to 50 feet deep, worked by 500 to 600 Mappilla slaves belonging to the

*/ The Kurumbas worked in three shafts to extract the ~~ore~~ metal. And they claim that their ancestors ~~whose~~ were the ones who discovered and extracted the ore. The whole area around their villages in the Bendla area had many shafts in which they worked. (Fletcher, 1911)

Nilambur Tirumalapad (the chief local landowner) who was required to produce a barley-corn weight of gold per man per diem." (Travancore, 1908, Pg 14).

In the 1860s, when the area was being opened out for coffee estates, the traces of old gold workings attracted the attention of ~~some~~ the planters, some of whome had seen the Australian gold-fields. Here some of the shaft were reported to have been 70 feet deep.* The first wave of commercialisation in the Colonial period in Wynaad area was by the experimentation and expansion of coffee plantations. ~~In two decades after its introduction, by 1879, coffee was the most important commercial crop of the Nilgiris.~~ In the Wynaad, the plantation centres were the O'Valley, the Devala-Pandalur area, and the Vellakottai

On the plantations

On the crest of these ghats, that were exposed to the high rainfall of the south-west monsoon, the coffee plant was frequently attacked by the borer and leaf diseases. Further the steepness of the area caused heavy soil erosion while the soil was to be worked for coffee plantation.

"The land being steep and the weeding having been done with that implement of torture, the mamotie, all the surface of the soil was in a very short time washed down to the valley below."

And soon the productivity of such estates on the ghats came down. Such estates became unviable.

area. ~~In the next few~~

In the next few years the plantation areas indiscriminately grew all around Wynaad. ~~and suffered serious~~ ~~Big~~ Heavy forests on the crest of the ghats were opened up for plantation, because the coffee fetched good prices on the European markets and was thriving well in the Wynaad. But ~~as~~ for ~~reasons~~ of a whole set of reasons the plantation industry in the Wynaad suffered a set back.

The large scale replacement of tropical forests with a mono-culture of coffee all one peninsular India and & Sri Lanka made them more susceptable to pests. ~~May~~ Many pests like stem borers and leaf diseases ~~was~~ spread among

the plantations that could not be managed. A whole series of pests swept across these plantations in peninsular India and Sri Lanka between 1845 and the 1870s. The ~~borers~~ most significant ~~of~~ was the borers ~~was the~~ 'Xylotrechus quadrupes' that has appeared in Sri Lanka and spread to the Wynaad and Coorg areas in 1865-66. Added to this the a leaf-disease, a fungus 'Hemeleia vastatrix' first appeared in Sri Lanka in 1869, and spread to India ~~to~~ in 1871.

~~The~~ Many plantations in the Nilgiri were affected. ~~but the the ones ones at the crest of the ghats were more susceptible to these diseases.~~

~~*/ Page 5 Go to plan~~

*/ Go to page 5 asterisk *

Compounded with all this, there was a slump in the London market for the coffee bean. Brazilian coffee was now being sold in the London market and this depressed the prices for the bean. All these factors made coffee estates unviable in parts of Wynaad and many were consequently abandoned or sold. But the coffee estates that thrived were in more sheltered locations, away for the crest of ghats and the fury of the south-west monsoons. These were in the deciduous ~~tracts~~ forests of the Nilgiri-Wynaad between the crest of the ghats and the Nilgiri slopes, located mainly in the O'Valley and Nellakotai area.

The temporary slump in the sucess of ~~coffee~~ plantations in the Ulynaad, was replaced by an ephemeroal gold rush. While the gold-workings in the area was well known, serious prospecting for the metal began in the 1860s. The British had already started mining gold in Australia and the prices for the yellow metal was increasing. The Colonialists, ~~looked~~ looking for high value natural resources to usher in a market-oriented economy and world capatalism, were ~~obsed~~ obsessed with the yellow ~~now~~ metal. The Ulynaad area was a prospective site where local people used to extract the gold laboriously, from the auriferous veins in the quartzite bed of ~~meta~~ metamorphic Gneiss rocks.

~~The Government actively started prospecting in the 1930s.~~

There were many tunnels and shafts, some of them upto 20 m deep. From these tunnels, the rock ~~was~~ with auriferous veins was cut ~~and~~, brought to the surface and crushed. ~~There were~~ There were channels to bring water for washing the ore and extracting the metal.

The British prospected for gold in the area after discovering these signs. ~~Geologists and miners who experienced~~

European geologists and miners who had experience in prospecting for gold in Australia, ~~were~~ were invited to the Wynaad to survey and report on the suitable of the site for industrially mining

* The experts had hastely estimated that the quartz vein outcropped ~~at~~ in the Ullyaad extended all along until the Nilgiri massif. ~~and that gold mining~~ to the whole Nilgiri plateau was thought be ~~was~~ containing auric quartzite core. Thus Gold mining in the Nilgiris was concluded to be sustainable and very promising.

the metal. With their infatuation for gold, the ~~geologists and~~ experts reported ~~as~~ ~~'very encouraging'~~ the prospects of gold mining in the Wynaad as 'very encouraging'.* ~~Madras~~ These reports started a ~~demo~~ dreamy and brief speculative period of hectic industrial and commercial activity. In 1874, the first company, the Alpha Gold Mining Company was started with a nominal capital of ~~six~~ lakhs. They began operations in the Wynaad near the plantation town of Devala. ~~Soon~~, ~~around 1880~~, ~~The~~ The availability of easy capital in Europe, the universal scarcity of ~~of~~ gold ~~in the~~ during ~~the~~ period fuelled massive speculations and investments in gold mining in the Wynaad. ~~Companies~~

AFN pg 17, Francis (1908)

Compounded with this, the coffee-plantation in the Wynaad were already affected by unfavourable choice of sites, ~~pest~~ pest attacks and a glut in the bean market. The owners of ~~these~~ estates containing auric reefs were thus too glad to sieze a chance of disposing the estates at a profit.

By 1880, forty one mining companies were floated in England with a capital of over five million sterlings to prospect for Gold in the Wynaad area (Fraser, 1908). Pandalur and Devala boomed from being "little cluster of native huts" to a busy mining centre with houses, post and telegraph offices, a saloon, numerous mining captain banglows and even a race course. (FN).

Para/ At Pandalur, there are about 6000 families who earn their livelihood from mining the ore and washing for gold.

| Photograph of Gold extracting works near Pandalur |

Within a few years, this commercial enterprise completely flopped mainly because of the low quality of the ore, and the uneconomic terms of returns with the available industrial technology. By the end of 1880s, all the mining companies had been liquidated. However even to this day, local groups eke out a subsistence livelihood of mining the ore and ~~wa~~ washing it in the streams around the Pandalur, exactly as the Europeans ~~officers~~ had seen the native do it in the nineteenth century.[F]

The most significant impact and the lasting remenants of these wild experiments with commer-cialisation of natural resources in the Wynaad, was the forests and vegetation cover of the area. The natural forests were destroyed first by clearing

for coffee plantations and ~~thus~~ consequently by the mining companies. The destruction of forests ~~by~~ greedy expansion of by coffee plantations and its ~~ado~~ abandonment had affected large areas in the Western ghats of peninsular India. Foresters like Cleghorn laments on the caused to the forests.

" Quote from Cleghorn " on the denudation of forests caused by coffee estates.

In the Wynaad area too, the forests were denuded and the area overgrown with weeds, never to recover.

" The weeds soon overtopped the coffee, and as these become dried ~~as~~ tinder in the hot ~~as~~ weather, fire got in when hills were burnt according to the annual custom, and the cultivation was so effectively destroyed that

* In this section, add "the western portion of the Attappadi as the limit.

over an area of possibly ten thousand acres, once covered with fields of glossy, well-kept coffee, not one single tree remains. For mile after mile, nothing but an interminable sea of dhubbay grass marks the site of what were smiling estates —. ~~Ag~~

I greatly doubt whether anywhere else in India, a scene of such utter desolation could be found as presented by this part of South-East Wynaad - this wilderness made after the abortive search after gold." (Fletcher, 1911).

5.0 Expansion of Markets in the Modern Period.

The next wave of commercialisation of natural resources, the spread of market-oriented agriculture and structural adjustments ~~to~~ happed only ~~after~~ ~~the~~ after 1950s, after independence from Colonial rule. During the first half of the twentieth century, the area under coffee plantations had stabilised at about 8,000 ha. The coffee bush was

commercial

* There were other crops that were attempted in the first half of the twentieth century to further commercialise the landscape: These were mainly associated ~~with the~~ with the urgent demands during the war period. One such ~~crop~~ commercial crop was the 'Pyrethrum' that was extensively grown for a few years on the hills. Pyrethrum was considered as an anti-malarial insecticide. During the Second World War, there was a large demand for Pyrethrum from the military. For a short period, there was large scale cultivation of the crop on government lands, encouraged by the forest department. By the year 1946, these plantations covered over 730 ha producing about 121,748 kgs of flowers for the British army (Jayadeva, 1953). This enterprise was an economic failure and was ~~immediately~~ abandoned abandoned immediately after the war. By 1947, the cultivation of Pyrethrum was discontinued.

a much more sensitive plants and required specific micro-climatic conditions to be economically viable. After initial experiments with expanding coffee plantations, and consequent, devastating pest attacks, coffee had consolidated itself and established in the micro-environments favourable for the bush.

The tea bush was a hardier crop that had a larger ecological amplitude. It did well on the grasslands of the Nilgiri plateau as well as in the cleared areas of evergreen forests. Thus the acreage under tea steadily increased right through the colonial period from about 2,000 ha to about 18,000 ha. However expansions of tea and coffee were slower and the plantation industry consolidated

* Include from Asterix from page 15

** with the expansion of markets and market-oriented production systems

and was firmly established, caffinating the landscape of the Nilgiris. *PARA

The expansion of markets during the modern period was initiated in the 1950s, when the Indian Independent state took over the administration of the land. There were changes in the access regimes, changes in the landscape and waterscape * ~~were~~ initiated by introductions and movement of biota; ~~with~~ and changes in culture ~~and~~ with readjustment of human groups. And ** such changes expanded and intensified the commercialisation of natural resources to its perceptible limits. ~~And~~ Consequently we will follow the stream of conservation ideas and attempts in a later chapter.

PARA

/The ~~In~~ ushering in of the Indian independent state brought in ~~changes~~ significant changes in ecological and cultural spheres ~~access regimes~~ all over the Nilgiri area.* [(~~The~~ Indian state formed its internal boundaries on the basis of linguist groups.) [In the ecological sphere, there were changes in the human disease environment in the lower plateau, ~~stretching~~ extending ~~for~~ over Sigur plateau and the Wynaad plateau. During the later part of the Second World War (1943-1945), a Jungle Warfare Training Centre . . . .]

~~In the institutional sphere,~~

Independence and the reorganization of states had changed the priorities of ~~resource utilization all over the sub-continent.~~

*/ These changes were initiated outside the Nilgiri area, but their consequences were significant and irrevocable in the Nilgiri area. It ~~is~~ further

expanded ~~the~~ to the geographical limit the commercialisation of natural resources; and intensified resource extraction brought to head conflicts and concerns over the depletion of natural resources.

In the ~~Indi~~ institution sphere, political reorganisation followed the formation of the Indian independent ~~States~~ State. The Indian state formed its internal boundaries on the basis of linguist groups. Low ~~density~~ ~~in~~ population density western and ~~southern~~ portions of the Nilgiri area, the Nilambur plains, the Kerala-Mysore and ~~the~~ Attappadi valley were integrated with ~~the~~ the densely populated State of Travancore, and Kerala was formed. This initiated large scale migrations of land hungry people into the Attappadi, Nilambur and Mysore

areas. While the political reorganization and formation of ~~state~~ linguistic states facilitated this migration, there were two other factors that were important in allowing this to happen. The first is a change in access regimes and the second, a change in the human disease environment.

The lower elevations (below 1500 m) of the Nilgiri area were thickly forested and highly malarial. In fact these areas were so dreaded legendary and for the illness that in early period it was the deterrent to the European officers exploring and discovering Nilgiris. Travellers, going up to the Nilgiri hills for recuperation, recreation and duty were advised not to rest for a night

*/ There were other human groups who inhabited small micro-environments which may have been free of malaria, and other generally may have ~~[illegible]~~ survived in the area with a higher incidence of mortality.

on the lower hills, but climb up preferably from the Coimbatore plains in one day. The ~~local~~ indegenous inhabitants who ~~[illegible]~~ lived on the lower plateau, the Irulas and Kurumbas probably had genetic adaptations to living in a malarial environment (Ref or *FN). The incidence of sickle cell anemia, a genetic disorder ~~[illegible]~~ was known to be high ~~in~~ among these tribals.* In spite of such unfavourable environments ~~the~~ in the lower plateau, the Europeans were not ~~at~~ deltered in their efforts to open plantations and other commercial ventures in this area.* These were however limited in extent during the colonial period; ~~and~~ *Probably the very clearing

of forests and changing the landscape decreased the environments for breeding of the Anopheles mosquito and reduced the incidence of malaria.

There may have been many factors responsible for decrease in the incidence of malaria ~~during~~ at the beginning of the modern period. ~~Some~~ Some of these ~~factors~~ efforts were direct efforts and some others were indirect... During the latter part of the Second World War, (1943-1945), a Jungle Warfare Training Centre was established in the Nilgiris. It was at this time that DDT came to be used to eradicate malaria from the area. A Malaria ~~Eradication~~ Eradication Programme was initiated that ~~vigorously~~ vigorously sprayed DDT into every

stagnant water body in the Wynaad and Segur plateau. This may have had a direct effect in temporarily reducing the incidence of malaria in the Nilgiri area.

The indirect effect on reducing the incidence of malaria in the Nilgiri area was a consequence of changes in the surface water regime of the area. A series of dams were built on the Nilgiri plateau that impounded rainwater during the monsoons and distributed the stream flow in certain streams, all around the year. Waters from other streams were diverted into these main channels and they become seasonal. Thus, from widely fluctuating water flows in the rivers, with seasons of monsoon

and dry periods, in the mean stream channels, water flows were maintained steady and constant right through the year. This reduced the pooling and putrification of water during the dry seasons. The local inhabitants refer to this, ie perennial flows in certain streams, as the main reason for the decrease in malaria from the Nilgiri area (OH ....).

The other ~~indirect~~ effect may have been the feedback loop of habitat changes or changes in the landscape affected by humans and changes in the disease environment. Cutting down of forests, draining the swamps ~~are~~ and changing the moisture regime in the area, ~~mad~~ make have ~~cons~~ caused a decrease in

malaria. However, these three reasons were compounded, it caused a ~~det~~ ~~betterment~~ change of in the human disease environment in the Nilgiri area. It made it more favourable for human groups to migrate into the lower plateau of Attappadi, Wynaad, and Sigur.

Changes in access regimes and State Policy was the other dimension that aided the commercialisation of natural resources in the Modern period. The States were reorganized on a linguist lines in ~~the~~ 1950; and the State of Kerala was formed out of Travancore, Cochin, ~~and~~ other ~~princely~~ states, and along the sea board of the western Ghats. Malabar. The Malabar was thinly populated and

forested. Much of the hilly and forested areas in Wynaad/Nilambur and Attappadi were under the jenmis. The forest inhabitants, Kurumbas and Irulas maintained traditional relationships with the jenmis and within themselves/Among themselves. They maintained boundaries of the resources of the area ~~among themselves~~ and were insulated from the State by the jenmis. They ofcourse did interact with the forest department of the State, but this was nominal and their livelihoods was secure. Within a few years the State decapacitated the few jenmis in the area who controlled large tracts of land. With the attempts to implent ~~large~~ land reforms and population pressure

from the south, there was large scale immigration of a variety of human groups in the favourable environment of the Nilgiri area.

Starting from the 1950s, the immigrants for southern Kerala diffused into the western portions of the Nilgiri area, where land was available. The government initiated/encouraged such settlements under their land reforms programme. Thus the landless and small farmers in the south laboured and obtained land in the Wynaad area. The Pulpalli settlement and other settlements in the Wynaad were set up with government support. But once the settlement process and migrations from the south were initiated many

human groups from the south moved into the the Nilgiri area on their own enterprise. they made use of local contacts among the earlier settlers, networked among them, and procured land in the ~~Ulynaad area~~ Nilgiri area by ~~various means~~ whatever means available to them. In fact many settlers had sold their small pieces of land in ~~the~~ south Kerala and ~~bought~~ aquired larger lands in the Nilgiri area. And except for the reserved forest areas, ~~in~~ all other land in the Attappadi, Nilambur and Ulynaad were available to the settlers through various means. The settlers worked ~~on~~ hand-in-glove with the & local traditional

chiefs the jannis and their officials. These landed gentry anticipating their land alienation because of the changes in ~~the~~ policy quickly liquidated their assets and transferred ~~or sold~~ and gave occupational rights to the droves of settlers. The only group who lost out during this period of large scale colonization and expansion of commercialization in the Nilgiri area were the indegenous inhabitants.

~~Even among~~ The indegenous inhabitants, who had maintained traditional relationships with the jannis who normally controlled the land, this change of State policy and influx of

* These bands did not have ownership rights on the lands that they cyclically cultivated, but held these rights in the traditional linkages with the janmi. With the displacement of janmi and colonization by settled agriculturists from ~~the~~ South Kerala

people came as a blow. They had been insulated from the direct effect of state policy by the famine, and once famine abandoned their posts, the indegenous inhabitants had to ~~fed~~ fend for themselves. The settled agriculturists among them, the Chettis, and some Badagas inhabiting the nayals of Wynaad maintained their lands, but the hunting-gathering and shifting-cultivating groups of Irulas and Kurumbas inhabiting Attappadi, Nilambur and Wynaad were alienated from their resource base. */ They were ~~then~~ forced to retreat on to marginal lands that were not fit and suitable for settled agriculture, even if they had wished to ~~the~~ adapt the settled-agricultural mode (Refer

KSRI report on Attappadi).

The settlers from the south, came in with a very specific intent of commercial ~~ising~~ production. They came in with high value commercial crops and planted them on the landscape. Having acquired lands in the area they cleared the land of forest and scrub and ~~they~~ planted ~~commerc~~ any commercial crop that grew well in the area. In small landholding, with an average of 5 to 10 acres, they intensively cultivated the high rainfall rich lands to yield crops for the market. In fact this process of colonization and intense cultivation of the land was a process common to large tracts of land ~~bordering~~ on the western side of the lofty western Ghats ~~to~~ of

southern India. These small landowners established multiple cropping and agroforestry in these small ~~plots~~ and fertile plots. A whole variety of commercial crops were used in their venture of colonization: ~~Cocoa~~ Coconut in the lower elevations; coffee, cocoa, cardamom, and pepper on plateau; ~~and~~ rubber tea ~~in~~ on larger ~~estates~~ holdings; ginger, tapioca, turmeric, citronella, ~~and~~ vetriver etc as tubers to break in the soil, and a variety of other crops. ~~as~~ With these sets of crops, the migrants cleared forests and scrub lands to plant a diverse set of commercial plants and ~~to~~ set-up an intensive agro forestry system in the western portions of the Nilgiri area. With small and specific variations, this was the pattern of

Jack trees

changes in the landscape in the western portions of the Attappadi ; the Nilambur plains ; and the Wynaad plateau. In a sense, this model of colonization of the forested tracts of Nilgiri was common all along the foot hills of the Southern Western Ghats (Ref. Marcus Moench), and ~~If this model also~~ emanated from ~~the~~ southern Kerala. ~~The~~ The specific details may have been different, but it was human groups moving out of southern Kerala along with a spectrum of tools who colonised ~~the~~ Western portions of the Nilgiri area.

In the Wynaad, ~~they grew Citronella~~, ~~and in fact~~, the pattern of colonization followed

a very specific succession. The forests and scrub would be cleared and burnt. These would be planted, for a couple of years, with ginger or tapioca. In preperation for a sustainable agroforestry, the area is planted up with saplings of Daddups or Silver oak. After these tree saplings are established, the fields are planted with pepper ~~and~~ and/or tea. And ~~the field starts to yield from~~ genetically with 'improved' and selected varies of tea and pepper, these fields begin to yield from the third year onwards. Within this basic matrix of commercial crops, other self-provisioning and marketable-crops would be introduced and sustained in small number. Some tapioca, paddy in favourable sites, millets, a variety

some flowering plants like hibiscus & crysanthemum
of vegetables, and ~~tree~~ fruit trees like Jack fruit,
& trees, mango, guavas etc, would be planted at
homesteads, farm lands and vacant lands. The
immigrants thus set-up a diverse and complex agro-
forestry system in the Wynaad, but the main
as a seasonal crop and
commercial crops were ginger, pepper & tea as perennial
crops.

This pattern of colonisation of new lands in the
Wynaad has ~~been~~ ~~common~~ been characterised
with a set of ~~the~~ annual crops that are used to
break the soil and establish a farm. These annual
crops are also meant to yield livelihoods until
the gestation period of perennial crops begin to
yeild revenue, which could take any where between
one to seven years. The specific details of the

Set of crops used ~~would be variant depending upon the locality~~, has been varying ~~depending upon the~~ in different geographical area and at different times through the modern period. The particular set of commercial crops would be dependent upon the ~~geographical area~~ ecological conditions and the ~~market forces~~ demands for the crop. Thus, ~~in~~ the earlier crops in the Wynaad was the lemon grass 'Citronella' that grew in the whole Gudalur valley and later Ginger. This was the pioneering crop in the 1960s followed by Tea, Coffee & Pepper & Cocoa. In the Attappadi plateau the crops were Vetiver & Taproca followed by Tea, Rubber, Coffee & Pepper. And in the Nilambur valley, it

was paddy, with coconuts & rubber as the perennial crops.

~~The State policy and develop~~

State Policy and the expansion of commercial agriculture.

The State policy and the developmental priorities of the Indian independent state also ~~was~~ were directed to the commercialisation of natural resources and the expansion of markets. With shortfalls in foodgrain production and ~~growing~~ scarcities in the growing towns of independent, the government ~~has~~ launched a massive programme in attempting self-sufficiency in food production.

The state sponsored "Grow More Food" programme was initiated to increase food production for the larger economy. Under this programme, improved seed varieties of selected crop plants were introduced, agriculture was intensified with more inputs of water, fertilizer and pesticide; and the area under agriculture expanded.

In the Nilgiri area, the direct consequency of this was a programme initiated on the Nilgiri plateau. Potato was a commercial crop that could be cultivated easily and profitably on the virgin soils of the Nilgiri plateau. It had been tried on the plateau during the colonial period and did well.

Not-withstanding the experience of the Irish potato famine, and the impact of famines in India, the Indian independent State embarked on an ambitious programme to increase potato growing on the Nilgiri plateau. In this they were advised and aided by the Germans, ~~and~~ The Indo-German potato project was initiated to ~~the~~ increase massively the area under potato ~~and~~ among the cultivated lands, and to open out more ~~to~~ uncultivated areas with the potato crop. The programme sought to target the Todas and their Toda patta lands for the cultivation of potato (Anonymous 1967). Potato cropping was also encouraged even in the reserved forests to facilitate the raising of forest

plantations. Here it was seen as a pioneer species to break the soil, tend the plantations until canopy as well as generate revenue, much like the Taungya system. The Government provided seeds, fertilizer and pesticides at subsidized rates and on loans to encourage the spread of potato cultivation. The Government had set up had set up a series of seed farms, that distributed improved varieties of seed potato.

Include from thesis 8.4.3
pg 215 - 217

Quality)
1) Is it absorbing?
2) Are you able to visualize the land scape!

Access Regimes & State Policy
1) - traditional ↔ ~~Pr~~ Modern. Land Reforms.
Insulated
2) Language basis. ~~↔~~
High pouln ↔ Low population.

3) State Policy: ~~Nat~~ National interests; Grow More Food;

Enterprises: Changes in tea and coffee lands
Small farmers.

Immigration

Chapter V

~~Nilgi~~

Milking the Nilgiris :

Forests & Dairy

Pastoralism in the Nilgiri area :

The Nilgiri area was a famed pastoral tract. The Todas as well as subsequent human groups that interacted with the Nilgiri area used the pastoral mode to derive livelihoods from the environment. The perennial streams of the area, and the grasslands and pasture of the hills were well suited for pastoralism. Further, the low rainfall zones of the Sigur plateau and the Coimbatore plains and the eastern slopes of Nilgiris had were limited in providing favourable sites for settled agriculture. The Nilgiri area was also the hinterland of the settled agricultural centres on the Mysore plateau and the Coimbatore plains. The Nilgiri area was thus a "safety" areas and grazing

lands for the agricultural groups in adjoining areas of peninsular India. And ~~the Coimbat~~ while the back bone of agriculture was the livestock, the Coimbatore area was well known in its own right for pastoralism. ~~Spec~~ Specific breeds selected and suited for agriculture, like the Kongayam ..... (Ref. Mochdson) maintained and bred in the Coimbatore area were famous all over the Tamil plains. Pastoral herds from the Coimbatore plains seasonally brought their herds to the ~~Nilgi~~ lower plateau of the Nilgiri area to graze and fatten their stock. And the Moyar valley was famed all over peninsular India ~~for~~ as most suitable for ~~the~~ livestock.

The immense amount of hero stones and other archeological artifacts strewn over the

landscape of the ~~S~~ Moyar valley have pastoral themes depicted on them, indicating that the area was first colonised by pastoral groups, ~~[illegible]~~ who had conflicts with the indegenous people and the natural environment of the area. The hero stones depict conflict with wildlife and conflict with other pastoral groups, possibly over ~~to~~ grazing territories. Other hero stones detail the conflict between the pastoralists and the agriculturists, ~~and~~ ~~as~~ ~~with the [illegible] establishment~~ Other historical artifacts ~~indicate~~ like stone tablets, forts, ~~and water chan~~ terraced lands and water channels indicate the establishment of settled-agricultural groups ~~in~~ on the Sigur plateau, and the eastern portions of the Nilgiri area. However, sustained agriculture in these

marginal lands of the Nilgiri area were confined to small pockets along perennial streams and were short-lived. By the time the British gained control over the territory, agriculture was ~~down~~ run down, but pastoralism continued right through the historical period until modern times, as the most extensive mode of resource use on the Sigur plateau, the Coimbatore plains and the eastern portions of the Attappadi plateau.

On the isolated environment of the upper Nilgiri plateau, the ancient neolithic cattle keeping culture of southern India had permeated, albeit with the buffalo cult of the Todas. The grassland and sholas were ideal pasture for livestock, but the livestock

* The Todas held the buffaloes, their main means of livelihood as sacred and in the same communion as themselves. They had elaborate set of rituals centred around their buffaloe herds. A part of their buffalo-cult rituals for the dead involved an annual slaughter and sacrifice of a large number of buffaloes at their annual dry-funeral. It is reported that at these annual dry funerals, over 100 buffaloes (Ref. Thurston) would be sacrificed.* While the slaughter may look inhuman and wasteful, it may have served a useful purpose in limiting the buffalo population and the continued Nilgiri plateau within its sustainable limits; and was helpful in the redistribution of resources on the plateau, by transferring rights over the dead buffaloes to the Kotas. The British, when they ~~gained control over the Nilgiris~~ established a colony on the Nilgiri hills, perceived the sacrificial rites as inhuman and wasteful. They attempted to ban this practice and achieved in stipulating that only 2 buffaloes will be sacrificed at the dry funeral (Thurston). Many years later, when discussing this, senior Toda citizens commented that it was an ignorant and wasteful act, depriving them of their own wealth. Over the years, with the process of cultural imbibement or Sanskritization,

* Further, the Todas were 'vegetarians', a cultural trait and a peculiarity among pastoral groups around the world. The large number of buffaloes sacrificed were never consumed by the Todas in any way, but more traditionally claimed by the Kotas, the artisanal group on the Nilgiri plateau. They ate the meat of the buffaloes and may have used the leather for fashioning some tools & implements for on the hills.

the Todas themselves started to view the act as ignorant and wasteful. (Ott.....).

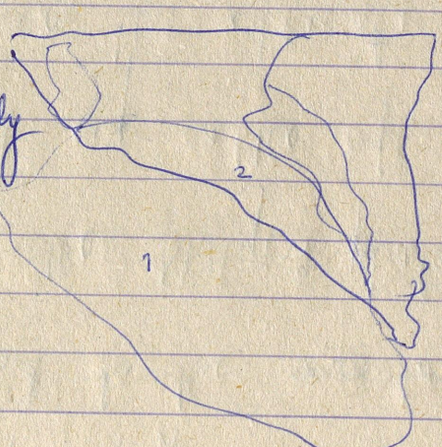
had to specifically adapt to the montane tropical environment of the Nilgiri plateau. But once acclimatized the buffalos survived and thrived well on the Nilgiri plateau. Infact from the reports of the traditions of buffalo ~~slaughter~~ sacrifice at funerals and other occasions, it seemed probable that there was an over production and excess population of buffalos on the plateau. With the coming of agriculturists, the cattle was introduced on to the plateau. The cattle was suited to ~~the~~ agriculture on the hills and was extensively used to plough fields and fertilize the poor soils of the Nilgiri plateau. However the coming in of settled-agriculture reduced the grazing areas, but still grassland tracts were extensive enough on the plateau to cause any serious constraint to a

for the Todas.

pastoral mode of life. But, while the buffaloes were long adapted to the ~~mountain~~ wet and cold climate of the Nilgiri plateau, the more recently brought up cattle of settled agriculturists could not survive the climate of the upper plateau. Further, with field crops in the areas around the villages during the growing season, the cattle had to be grazed in more distant locations. For these reasons, during the months of August to February, the cattle of the Badaga agriculturists were ~~be~~ grazed and penned on the Sigur plateau 1000 metres below the Nilgiri plateau. Thus while the buffaloes used to migrate from the ~~eastern~~ eastern to the western portions of the Nilgiri plateau

Give an estimate of the area,
number of settlements from SOI database.
population levels (M: F also)
estimate of buffalo herds.

The niches of the Toda buffaloes and cattle of the agriculturists marginally overlapped, and largely exclusive.



(Map of the various locations of herds)

itself, the cattle used to migrate up and down, from the Sigur plateau to the Nilgiri plateau. And from February to August, the cattle were driven up to the hills.

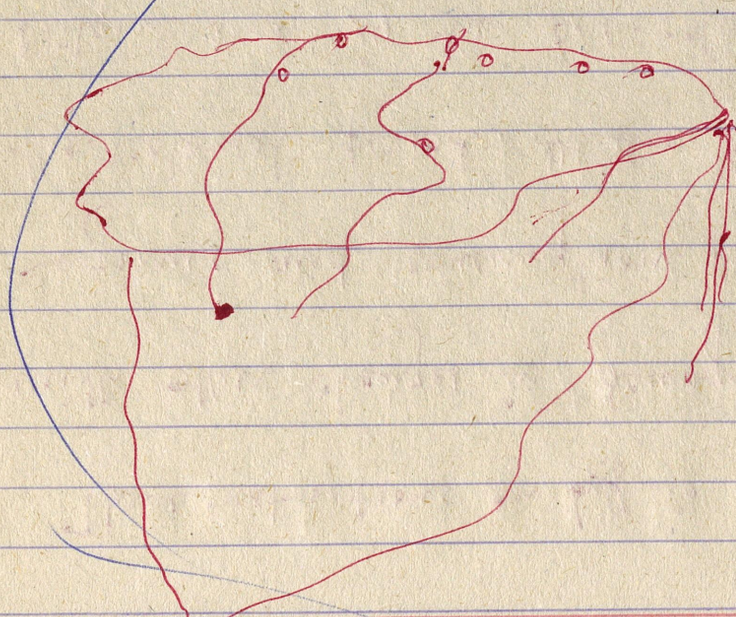
The two worlds of the Toda buffaloes and the cattle of the agriculturists marginally overlapped and was largely exclusive.* But the dairy culture, that included the sacredness of the dairy were common all over the Nilgiri area. This may have been imbibed from the buffaloe cult of the Todas, who are considered the early inhabitants of the Nilgiri plateau.

Pastoralism in the area thus continued from the pre-British period until the Modern Period, with some variations and changes. Pastoralism was the mainstay livelihood of the Toda who maintained buffaloes and exchanged grain and other resources from the surrounding agriculturists on the plateau. The Todas were vegetarian. They subsisted on the dairy products and other grain that they recieved from the agriculturists of the area during the harvests. This was considered a 'guddu' or land rent given to the Todas. The Todas managed their buffaloes as individually owned and temple buffaloes tended by the temple-priest. Buffaloes used to be periodically (yearly) sacrificed

at the Dry Funeral ~~feasts~~ of the Todas to propitiate the dead during that year. ~~These~~ The Todas were vegetarian, and the sacrificed Buffaloes were taken by the Kotas. These sacrifices may have helped keep the buffaloe population on the hills within limits and effect a resource (food) resource transfer from the Toda pastoralists to the Kotas ~~craftsmen~~ artisans and musicians on the plateau.

These restrictions on buffalo sacrifices were concommittent with other changes in demography, ~~property~~ rights regimes and consumption patterns that occured during the colonial period. ~~While~~ Cattle had been in the Nilgiri area in the pre-colonial period, but they were mainly supportive to agriculture in the Nilgiri area and beyond. Establishment of colonial rule ~~provide~~ caused an increase in the human population on the Nilgiris and provided a market for dairy products like Ghee. While the Toda dairy was unaffected by increase in these markets, the cattle-based dairy responded to provide dairy products to the increasing population on the Nilgiri hills. Thus the cattle in the Nilgiri area, in addition to being the backbone of agriculture provided ~~dairy~~ for Ghee for the markets on the Nilgiris

Add



Cattle / Buffalo penning sites on the Bogan plateau.

List of sites with location.
Estimates of numbers?

* and in addition to cattle maintained buffaloes to produce exclusively for the market.

. The agriculturists Badagas who maintained cattle increased their population and penned them more often* on the Togur plateau. The plateau itself was ideally suited for pastoralism. Attempts at setting up sustainable agriculture on the Togur plateau had failed. So the Badagas agriculturists set up cattle pens or 'paltis' all along the perennial streams of the Togur plateau. (Map of the pens in the Togur plateau). The livestock were seasonally penned in the Togur plateau. Local labour, of the Irulas and Kurumbas, but more Irulas were used to tend and manage the livestock. Relations between the Irulas and Badagas were not just as wage labour but were compounded with livelihood support for the family, and traditional and ceremonious

exchanges and interactions beyond the realm of pastoralism.[*FN]

[*FN During my first field work in the area in at Anaikatti 1986/7 I have heard myths about supremacy and control over the wild animals, like the capture of elephants, taming of the tiger and control over cobras. This ~~is a recurrent~~ ethereal communion with nature is a recurrent theme during later field work and oral histories from respondents. (OH of Maran of Anaikatti).]

As related earlier, the ~~two~~ communities, while interacting with each other in the pastoral mode among others, also had violent interactions among themselves. ~~Fearing enemy~~, the Badagas who owned

the livestock ventured into the Sigur to supervise the ~~[illegible]~~ dairy, but were fearful of sorcery. ~~[illegible]~~ While some of the Badagas migrated to settle permanently on the Sigur plateau, ~~(These were mainly in~~ (FN * on Moyar Gownder / ~~[illegible]~~; Mylarpatti, ~~Anaikatti~~ Kootrapatti Gownder; Anaikatti Sami) the others supervised and controlled their ~~dairy~~ livestock from villages on the ~~[illegible]~~ hills. These Badagas were concentrated all along the northern rim of the Nilgiri plateau and overlooked the Sigur plateau. (Map of distribution of Badaga villages with interests in livestock). From the Nilgiri plateau there were four routes descending speetly ~~along~~ on the northern slopes to the ~~Sigur~~ Nilgiri plateau. The livestock ~~were~~ were

maintained on the Sogur plateau in ~~the~~ temporary ~~cattle~~ livestock pens all along the perennial streams. ~~At the~~ At these pens, the Toda & Kurumba workers tended the livestock ~~stored~~ and extracted butter from the milk produced. This was then clarified to Ghee, and transported in time to be sold in the markets on the hills. With little vehicular communication routes and steep inclines only non-perishable livestock products could be stored and headloaded for the markets. Livestock rearing thus involved tremendous labour for tending and managing livestock, extracting Ghee and transporting ~~the~~ products to markets. And while the livestock were owned and managed by the Badaga agriculturists ~~the~~ settled on the rim of the Nilgiri plateau, they were tended

by ~~the~~ families of Irula, who maintained a jajmani-jajmani relationship with the Badagas ~~on the~~ northern rim of the Nilgiri plateau.

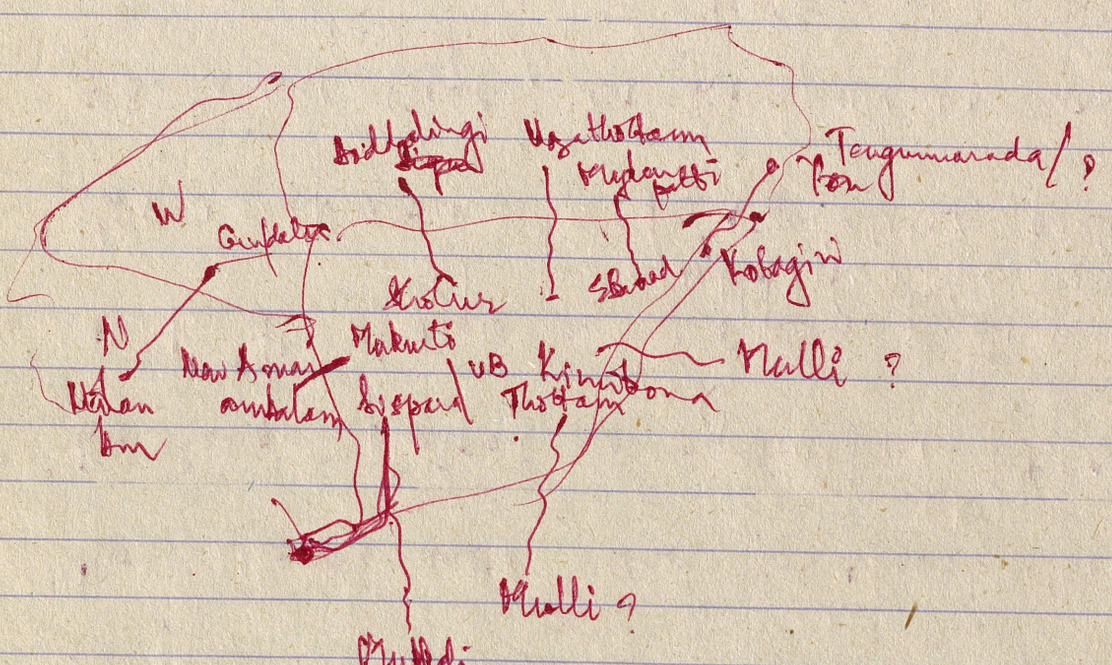
~~The Ecological Articulation of Pastoralism~~:

The livestock ~~of~~ ~~to~~ maintained on the Togur plateau, were ~~mainly~~ a mixture of cattle, buffaloes and sheep. ~~The~~ The sheep were ~~in~~ a small number confined to the eastern portions of the Togur plateau. The sheep rearers were ~~now~~ the Kurumba Gowders contiguous with the larger group of sheep rearers of the Mysore plateau. The cattle and buffalo population were managed and maintained by the Badagas, in partnership with the Irulas. Cattle & Buffalo had ~~unique~~ & different utilities, ~~and~~ systems of management, and three responded differently the changes in resource availability, changes in

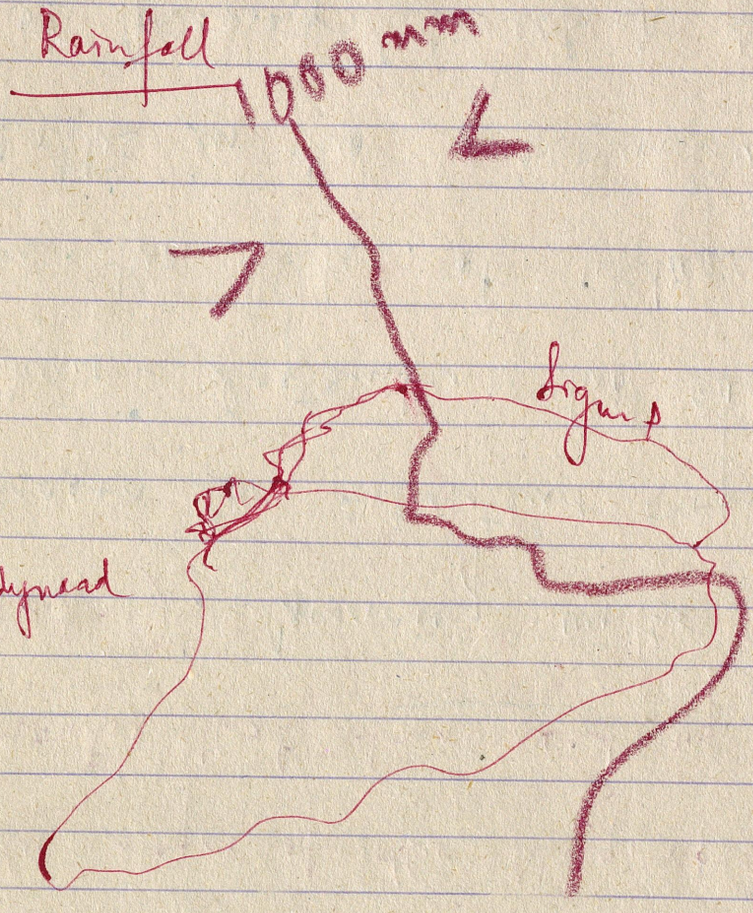
demand for livestock products, and the ~~disease environment~~ livestock epidemics through the historical period.

The cattle were traditionally kept by the Badagas and was the backbone of their agriculture. The bullocks were used to plough the terraces on the Nilgiri plateau for agriculture [*FN .. Today, with the changes in cropping pattern, ~~[illegible]~~ ~~with~~ ~~the~~ a replacement of food crops with vegetables, cashcrops and plantations crops, the field are no more ploughed. All cultivation of the Nilgiri plateau is with the ~~the~~ fork or the 'mullu' as it is called in the local ~~bag~~ bazar as the ubiquitous tool of the agriculturist] The dung was an important source of manure for the weak soils of the area deficient in lime and other nutrients. The other product

Routes in the Nilgiri Hopes.



was milk and dairy products which were facultatively consumed by the ~~boor~~ population of the area. Because of this need and integration with agricultural livelihoods, the herds of cattle were moved ~~up~~ seasonally up and down the slopes of the Nilgiris hills by the ~~four~~ routes that traversed up and down. (Map of Routes). Coinciding with the the agricultural season for subsistence crops; ~~in~~, ~~the~~ from June - September, the cattle would be kept on the hills, at villages or in some pattis in the surrounding grasslands. (Map of ~~Grazing~~ / livestock pens, patti / Toda hamlets / Seasonal / Perennial), on the Nilgiri plateau)



J, F, M
Low Rainfall.

A, M,
Intensifying

J, J, A
Monsoon

S, O,
Weakening

N, D, ~~South Eastern~~ Pal
South-Eastern portions

According to Lengerke:

June - September 2nd Intermonsoon → October/November
SW Monsoon

April / May
1st Intermonsoon

~~April / May~~
(~~[illegible]~~)

December / March
NE Monsoons.

During the lean period, from December to March / April, the cattles were penned at the pattis on the Sigur plateau, grazing freely in the Savanna Woodlands and Scrub lands of the Sigur plateau. And water was always available among the three perennial tributary streams of the Moyar river. [Map of Perennial streams of the ~~Nilgiri~~ Sigur Plateau with pattis located]. Oral history accounts these migrations. ~~with saying~~ They add that, the grasslands on the Sigur plateau were plentiful in the area and thorny scrub lands were less and in small pockets around the few permanent habitations on the Sigur Plateau.

In addition to the seasonal migrations of small herds of cattle up and down the Nilgiri plateau, livestock rearing was intensive on the lower plateau, the foothills of the Coimbatore plains and the Attapadi plateau. (Map of Grazing areas). Irula and Kurumba groups maintained the livestock in the area. This involved intensive work. The livestock were penned in locales ~~around~~ along perennial streams. The adult animals were set out for grazing in the forests ~~in~~ each morning. They were sent along specific directions, often with an Irula escot. ~~and~~ The animals would be grazed over a distance of about 2/3 kms from the pen. [While the cattle needed protection

and escots for grazing in the savannah woodlands, the buffaloes were more free ranging and were left to fend for themselves in the savannah-woodlands. Infact feral ~~groups~~ buffalo herds and buffalo males freely ranged in the savannah woodlands, and these were the ones that impregnated the female buffaloes in the pens to maintain and procreate the buffaloe stock on the Sigur plateau.]

The livestock were collected back in the evening ~~to~~ at the penns. They were then allowed to be suckled by the calves and milked. ~~for the next to by the~~ for making dairy products.* [The collected milk was kept in the dairy, a seperate ~~last~~ portion that

* [Move to next page]

was considered sacred and women were excluded from them. [*FN This may ~~be~~ have been a cultural imbibment from the Todas who ~~mainted~~ maintained sacred dairies and had elaborate rituals associated with them.)] The milk was marginally used for consumption by the labouring family and the rest curdled for extracting Ghee. [* ~~After~~ During the day, the curdled milk was churned in large urns, by large churners with a draw string attatched to a ~~the~~ wooden post. All these instruments and the dairy were considered sacred, and ~~of~~ outsiders were not allowed into these. Extracting butter and clarifying it to make Ghee was an intensive job and involved a lot of labour. Clarifying the butter at these

* [More from previous page]

dairies needed fuelwood, that was extracted from the savannah woodlands around the cattle pens. And finally the Ghee was to be transported in 15 kg cans to the markets on the ~~Nilgiris~~ Nilgiri plateau and the urban areas on the Coimbatore plains. These were normally loadload for a four hour trek up the Nilgiri slopes.

The buffaloes kept at these pattis* were mainly for providing dairy products to the markets, while the cattle were used mainly to support agriculture. Buffalo milk had more fat and ~~SNF~~ solods content and thus produced more Ghee for the markets. And while the cattle livestock ~~was~~ ~~was~~

needed more care, ~~and~~ protection and bred at the pens, the buffaloes herds were more hardy, free-ranging, interacting with feral herds in the area and inseminated by the genetic stock in these feral herds.

Commercialisation of dairy products for the market had wide ranging consequences for livestock rearing, the ecology and environment as well as the social structure in the Nilgiri area. The attempts of the British at commercialisation of the resources of marginal lands by market-oriented agriculture had failed (as noted earlier in Chapter IV). And pastoralism was ~~to encourage~~ used as the predominant mode of commercial exploitation of the natural resources of these

(*PN The event of ~~machinery~~ utilizing machinery for extracting Ghee on a large scale and for markets was etched in the oral tradition of the area. ~~Wh~~ Other details were very sketchy, like the number of livestock or the years during which the event occoured. Oral history also relates that the experiment failed and ~~to~~ the project was abandoned. The livestock were given over to the Badaga partner who had settled in Moyar.)

marginal lands of the Nilgiri area. In fact, while the pastoralism was sustained by the enterprise of the agriculturist Badagas, there were attempts at European enterprise entering pastoralism on the Sigur plateau. Oral history relates to a European attempting to set up a dairy at Moyar on the Sigur plateau (OH...) ~~Lo~~ Oral history records that a "whiteman" came to the Moyar and ~~in~~ ~~[illegible]~~ set up a dairy with mechanical machinery to ~~[illegible]~~ churn the Ghee for markets on the hills. (*FN) This was related by a Badaga family settled in Moyar whose ~~was~~ farther was a partner in this venture. For unknown reasons European enterprise in pastoralism on the

(* FN While it is not possible to date this flash of European entrepreneurship exactly, it must have been in the second half of the nineteenth century. This was consequent to the posture of the agricultural station in on the Nilgiri plateau. During this period, many ventures of entrepreneurship spread all over the Nilgiri landscape. There were attempts at opening plantations of tea and coffee in the marginal lands and commercial pastoralism by European entrepreneurship. While pastoralism failed, European entrepreneurship in plantation industry grew and flourished all over the Nilgiris.)

Sigur plateau failed, but local enterprise ~~flourished and con~~ of ~~pasto~~ pastoralism, flourished and continues to flourish until this day, albiet with variations. (*CN)

During the British period, ~~After~~ ~~[illegible]~~ Commercialisation was an added incentive for pastoralism in the lowrainfall savannah woodlands of the Nilgiri area. ~~The~~ ~~indegenous groups of Irulas~~ while livestock was still ~~the~~ ~~[illegible]~~ an essential backbone of agriculture, ~~[illegible]~~ with ~~to~~ the development of townships, tea estates and human settlements on the Nilgiri plateau, livestock products had a market. The indegenous groups of ~~[illegible]~~ Irulas who laboured in the dairies had no linkages with the markets. They were more ~~do~~ forest dwellers - extracting

(*FN The introduction of cattle on the Nilgiri plateau is a contentious issue. The Kotas, the primary aborigines in the area, claim an antiquity earlier to the Badagas. They are known to be agriculturists and may have husbanded cattle on the Nilgiri plateau much before the Badagas. The Kokal, as Koba hamlets are called, may have had linkages with the sacred cattle. But other traditions of eating carrion of buffaloes and their myths do not present a clear conclusion of the matter of their association with agriculture or cattle.)

livelihoods from pastoralism; hunting, and gathering and scavenging; and some marginal agriculture in these drier tracts.

The Badagas, the agriculturists located on the northern rim of the Nīlgiri plateau were ideally positioned to exploit this enterprise. Being agriculturists, they had always tended cattle, and may have even brought the cattle upto the Nīlgiri hills (FN)

They were settled agriculturists who saw the initiation and European colonization of the Nīlgiri plateau. With changes in property regimes, they held on to their rights over their lands; expanded their rights over lands to the extent possible; and participated in

of hunting-gatherers

(*FN Other communities had retracted in forested lands, and the pastoralist Toda managed to keep aloof from the commercialisation although they were close to markets and townships.)

process in
the commercialisation/ of the Nilgiri area (*HN).
The Badagas were culturally bridged between
commercialisation and markets; and the Irula,
Kurumba forest dwellers. And the Badagas
occupying the northern rim of the Nilgiri
plateau were geographically situated between
the lower Sigur plateau, and the townships
located on the Nilgiri plateau. Additionally
the grazing lands of the lower plateau were
forested and known to be malarial during the
colonial period (Refs.....) and inhospitable
to humans. The Irulas and Kurumbas inhabiting
these areas were probably genetically adapted
to the malarial environment (Ref. on frequency
of sickle-cell anemia). Thus/on the northern rim of
the Badagas situated

the ~~~~ Nilgiri plateau more ideally positioned in ~~~~ utilising the human and natural resources for a commercial pastoralism on the Nilgiri plateau; while European enterprise ~~~~ at commercial pastoralism had failed; and the forest-dwellers ~~~~ did not have the ~~~~ capability to build direct linkages with the markets.

Agriculture was only confined to pockets in these drier tracts, the Nilgiri plateau, forested areas of the the Coimbatore plains and the Attapadi plateau. Pastoralism was the ~~~~ major commercial mode ~~~~ of resource use in these areas. Oral history says that the area had much more ~~~~ savanna grazing areas than the

thorny scrub that is common today (Ref.. NBR Map Prabhakar & Pascal, 1996)