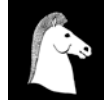




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Famine in a Forest Tract: Ecological Change and the Causes of the 1897 Famine in Chotanagpur, Northern India

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SUMMARY

This paper addresses one of the most under-researched areas of resource use and management in rural India, that of 'wild resources', and explores the links between ecological change, famine and poverty. It is argued that once deforestation started to take place (in the context of the exploitation of the indigenous people by an outsider landlord class, aided by the colonial state), and the forest department denied people access to traditional famine foods, the Chotanagpur region found itself for the first time subject to the kind of vulnerability to famine that had affected lowland populations for a much longer period.

'The earth is full of spirits as a tree is full of leaves'

(Ancient Oraon saying)

The study of famines has gained ground in both Asia and Africa in recent times. It is well known that during the nineteenth century India experienced a series of subsistence crises, particularly in the latter half of the period. However, analyses of these famines by historians have rarely included a study of environmental changes. This is unfortunate as it is becoming increasingly clear that a knowledge of the ecological basis of different peasant economies is crucial to an understanding of the capacity of certain communities to withstand drought and other famine-related hazards. In the nineteenth century many Indian communities were disturbed by the advent of the railways and the inroads of private capital. Such disruptions often destroyed traditional economies,¹ dislocating



FIGURE 1
Districts of Bihar, with hatching to show Chotanagpur region

customary patterns of living and making these communities much more vulnerable to famine and disease. To date, most studies of famine have tended to underestimate the changes made by modernisation and 'development'.²

In 1897 a famine of serious dimensions affected Chotanagpur, in the province of Bihar. Food prices increased rapidly and by August the official famine reports noted that there had been a heavy increase in the death rate in all the districts.³ The increased mortality was chiefly due to an epidemic of cholera which was very severe in Hazaribagh and Lohardaga. However, cholera was not the only killer. Andrew Forbes of the Famine Enquiry Committee noted that,

Independently, however, of cholera there has been a marked increase, as in Manbhum, for instance, where although the deaths from cholera have notably fallen off since June, the death rate has still been increasing. This is no doubt due in great measure to the general lowering of the system among the labouring classes owing to the want of proper food and the consequent diminished power of resistance against attacks of fever and other ordinary diseases.⁴

Unlike earlier periods of scarcity which can be said to constitute a subsistence crisis, this was clearly a 'famine that killed'.⁵ What was remarkable about the nature and the scale of the 1897 event was the fact that it was the first major famine recorded throughout the region, especially in the southern districts of Ranchi and Singhbhum. In earlier periods of scarcity in 1866-67 and in 1873-74, the distress was confined to the northern districts, and mainly to Palamau which had seen important demographic changes and a growing pressure on the land after the 1830s. However this distress was soon alleviated as the local people could depend on the abundant forest produce to avert any major crisis. In 1874, for example, two tracts of the country, known as Tori Pargana and the 'Five Parganas' in Palamau district were affected to a slight degree. The highest price of common rice reached in the Five Parganas was 10 seers to the rupee but this lasted only for a fortnight and the difficulties consequent on the high prices were only local and not serious enough to warrant the undertaking of any special or extensive measures of relief.⁶ A bumper harvest of *mahua* (*Bassia latifolia*) and an abundant supply of jungle produce ended the impending famine.

In 1896 however the crisis did not have such a simple resolution. By November 1896 the prices of food grains were on the increase in all the districts. The poorer classes felt the pinch and one indication of this affliction was an increase in the number of beggars, especially in the small towns. The movement of people in search of work and the increase in the numbers of wanderers along country roads was another indicator of the extent of deprivation. This time there were fewer resources in the hands of the people to combat the scarcity. In the intervening 20 years since the preceding food crisis the area under reserved and protected forests had increased, exploitation of forest areas by landed elites had intensified and the poor, especially in rural areas, had less access to critically important forest products. They also faced much increased pressure on their

lands from a variety of different interest-groups. Apart from population growth, which contributed to the pressure on the land, state and private capital interests effectively joined hands in many areas to extract vital natural resources from the rural districts, beginning with timber and game. The crisis sharpened with the passage of years and climaxed in the last decades of the nineteenth century in the 1897 famine.

In this paper I attempt to identify and characterise the growing pressures on the forest economy of the tribal people in Chotanagpur in the nineteenth century and then move on to examine the dynamics of the famine period itself. Particular attention is paid to the kinds of indigenous strategies for coping with local food shortages that were gradually destroyed by capitalist encroachment and colonial state policy. I also consider the most under-researched area of resource use and management in rural India, that of 'wild resources'. These resources were of critical importance to the tribal people, not only for their economic and nutritional value but also for the cultural and aesthetic values encompassed within hunting, fishing and gathering activities and in relations with the natural world in general.⁷

THE FOREST ECONOMY OF THE TRIBAL PEOPLE IN CHOTANAGPUR

Chotanagpur is one long undulating sweep of hills which occupy the southern quarter of the province of Bihar. Its total area is 44,000 sq miles (about the size of England) and is divided into the districts of Hazaribagh, Ranchi, Palamau, Manbhum and Singhbhum and the princely states of Kharsawan and Saraikela. At the centre of the region is a great plateau averaging 2000 feet in height, with ridges running out as far as Bengal. Parasnath, the highest mountain of Chotanagpur lies on the eastern boundary of Ranchi.⁸ To the Aryans in ancient times and to later Muhammedan invaders in the medieval period, the whole of Chotanagpur and the adjoining hill states was known as 'Jharkhand' or 'the forest tract'.⁹ The name indicates that the whole of Chotanagpur was at one time a huge forest consisting mainly of *sal* (*Shorea robusta*) trees from which isolated hills stood out covered with upper mixed forest.¹⁰

In earlier times these forests had been left untouched and the region was populated by 33 different tribes which included the Mundas, Oraons, Santhals and the Hos. They were not to remain undisturbed for long. The waves of Hindu and Muslim migration in the medieval period had already seen the gradual alienation of tribal lands and the growth of a new landlord and moneylending class. This process was hastened dramatically with the advent of the British. The landlords and moneylenders were then able to strengthen their position by using the new institutions of the colonial state, particularly the police and the courts, to dispossess the tribal groups and finally to oust them from their lands. The

building of the railways in the 1850s further facilitated the process of change and the destruction of traditional patterns of life. The railways entered Chotanagpur on three sides, large areas of forest being destroyed in the course of their construction. With the arrival of the railways, a contemporary observer noted, 'vast stretches of jungle have disappeared, swept clean off the surface of the land or represented only by a puny growth of saplings that will take a century to rival the magnificent trees that were there before them'.¹¹

The original forests were spread out over thousands of square miles, especially in the districts of Hazaribagh, Singhbhum, Palamau, and Ranchi, all of which had large forest areas. Indigenous rulers had tended to preserve the forests for military reasons and, as Walter Hamilton noted in 1820, in several parts of Chotanagpur the woods had been kept forested with great care by the rajas as a protection against invasion from without.¹² The trees were mainly either moist deciduous or dry deciduous and the whole division had a very rich growth of *sal* (*Shorea robusta*).¹³

Ranchi district in the centre of the Gangetic tract was one area where the *sal* tree was most dominant. The best *sal* forests were found here in the valleys where in good soil straight trees up to 120 feet in height and with a girth of up to 15 feet were found.¹⁴ In the valleys, especially in sheltered situations, the principal companions of the *sal* were the *asan* (*Terminalia tomentosa*) *gambhar*, *kend* and *simal*. The *mahua* tree (*Bassia latifolia*) was common throughout Chotanagpur and was very important to the local economy. In the villages grew better fruit-bearing trees like the *jamun* (*Eugenia jambolona*), *karanj* (*Ponamia glabra*), *tetar* (*Tamarindus indica*), *bael* (*Aegle marmegos*), jackfruit (*Artocarpus integrifolia*), *pipal* (*Ficus religiosa*) and *ber* (*Ficus benglensis*). There were many other forest shrubs and trees which yielded fruit and which afforded valuable food supplements in years of scarcity. Slacke, in his report on the settlement operations in Chotanagpur estate in 1882, enumerated 21 species of seeds and the fruits of 45 uncultivated trees which were used as food in addition to 34 trees the leaves of which were used as vegetables, and 18 species of edible roots. Slacke also gives the names of 97 forest products used as medicines, 28 used as oils and gums, 17 used as dyes, and 33 creepers or barks of trees used as rope fibres. The length of these lists gives us some indication of the economic value of the jungles to the indigenous inhabitants.

Valentine Ball noted in the 1860s that several of the tribes were heavily dependent on jungle products. For example the Keriaks of the Jolhari hills, who were not settled agriculturists, relied on the jungle for a supply of fruits, leaves and roots. This they supplemented with rice procured from the lowland agricultural communities by trading jungle products such as honey, *lac*, *sal* seeds and leaves and *tusser* cocoons.¹⁵

Most of the tribes had a highly sophisticated technical knowledge of their jungle habitat. The Hos of Singhbhum, for example, who were essentially a forest tribe, had names for all the common plants and those of economic

importance to them and, like the forest Mundas, were well versed in the edible properties of plants. The Birhor, in the extreme east of Singhbhum, were a wandering tribe who lived by snaring monkeys and by collecting the fibre of the *Bauhinia vahlii* creeper. The forest environment, and a deep knowledge of it, was thus of critical importance to the native peoples, particularly in diet terms. This importance in food terms was paralleled by an equal significance in systems of belief; and the two were not truly separable.¹⁶ In order to examine the precise nature of the wild food resources, and the consequences of their removal, one needs to identify the particular species of plants that were of most value to the tribal people. This is, in fact, an area where research is still only at a very limited stage and only a partial attempt in this direction is attempted in the following paragraphs. At the outset it should be pointed out that many wild fruits and roots formed part of the *daily* diet of the *adivasi* majority in Chotanagpur and it is a fallacy to think, as some historians are wont to, that these items were famine foods to be eaten only in times of starvation. While it may be true that some foods were eaten most during the periods of scarcity (i.e. in between harvests from May to July) many others were regularly collected and eaten all through the year.

The most important food resource of the tribal peoples was the *mahua* tree. Early British reports mention that full grown trees were everywhere in great abundance.¹⁷ Not only were the fruits made use of as articles of food but the fleshy corollas constituted a staple article of diet for the poor for several months of the year. Towards the end of February or the beginning of March, as the crop approached ripeness, the corollas becoming fleshy and turgid with secreted juices gradually loosened their adhesion to the calyx and fell to the ground in a snowy shower. The duty of collecting the fallen blossoms was chiefly performed by women and children. At dawn they would leave the villages and burn the grass at the bottom of the tree. This was to enable them to pick the flowers. Two *maunds* of *mahua* flower were sufficient to furnish a months food for a family consisting of a father, mother and 3 children. *Mahua* was, however, seldom eaten alone, normally being mixed with the seeds of *sal* or jungle plants. In Ramghur, in Hazaribagh, as Walter Hamilton noted, the flowers provided the people with a convenient substitute for grain, as it would keep when pulverised for a whole season. It was also used for making an infusion like tea which afforded a nourishing healthy drink. However by the 1820s this process had been construed by British administrative officials as coming within the regulation against illicit distillation.¹⁸ The fruits of the *mahua* tree were also eaten in times of scarcity and the seeds were crushed to yield an oil which was used as a substitute for *ghi*. Other fruit sources included *piar* (*Buchanania latifolia*), *am* (*Mangifera indica*),¹⁹ varieties of *bier* (*Zizyphus jujuba*), *ber* (*Ficus benglensis*) and *pipal* (*Ficus religiosa*), whose fruits were eaten in times of scarcity by the very poorest Santhals and Mundas and *jamun* (*Eugenia jambolana*).²⁰ Water chestnuts (*singhara*) formed another important article of their diet and were a very wholesome food.

In addition to being used as a relish certain other gathered items were used as a basic energy source, especially during times of seasonal hunger. Several grass species were harvested wild as were the roots of certain shrubs and trees and some wild bulbs. The leaves of other plants furnished useful nutrients and were extensively used throughout Chotanagpur.²¹ The skill of the local people in collecting these wild foods and their knowledge of the plant and animal kingdom protected them in periods of scarcity. As a missionary in the Santhal Parganas noted, 'a Santhal will manage to live where even a rat would starve'.²² In Palamau most of the people obtained a good supply of flowers, fruits, barks, roots and tubers which formed important articles of food almost throughout the year and as district officers noted 'to this chiefly is due the immunity of the district from famine.'²³ The plants included *mutta* (*Antidesma diandrum*), *umtoa* (*Antidesma ghoesmbi*), *benchi* (*Flacourtia sapida*), *emli* (*Tamarindus indica*), *purenposi* (*Bauhinia purpurea*), *bhadwila* (*Olex scandens*) and *chakura* (*Cassia sp.*).²⁴ The pods of the gigantic creeper *Bauhinia vahlii* were particularly sought after. These were plucked just before they became ripe; so in order to open them it was necessary to place them in a fire. The seeds were then easily detached and eaten at once.²⁵ Root food sources included *bengo aloe* (*Discorea*), *moolum puddoo* (*Nelumbium speciosum*), *kesur* (*Scirpus kysoor*) and *tikur* (wild arrowroot). Several plants were used for their medicinal properties. *Akas bel*, the creeper that grew over *bel* trees, was used for the cure of anaemia. *Akwon* was a tree whose milk was used to cure rheumatism. The fruit of *amalatas* (*Cassia fistula*) was used as a purgative. The leaves of the *asan* tree were boiled and used medicinally for curing jaundice while the seeds of the *kauranj* (*Carissa carandas*) was taken as a remedy for dysentery. Many other plants were used in remedies for fevers and other common diseases.²⁶ Certain trees like those that produced *lac* and *tusser* were important for commercial reasons. In the open parts of Singhbhum, for example, a large portion of the waste lands were studded with *asan* trees whose leaves were used to rear *tusser* silkworms.²⁷

Apart from fruits and roots other wild food resources included fish and game. Fish was found in some abundance in rivers and tanks. Often they were caught by an elaborate method of erecting traps in rivers, while at other times they were simply stunned and then collected. A considerable number of plants were used to intoxicate the fish and these included *Pandia dumdorium*, *Cleislanthus collinus*, *Millelia auriculate* and *Polygonum glabrum*. Hunting was another important source of food to the tribal peoples and was often said to increase in times of scarcity to secure basic food intake. While in the early days big game was hunted, it would be a mistake to assume that the Mundas and the Oraons hunted only large game. In fact the hunting of rodents and other small mammals and birds was often more significant to settled tribal communities, especially when the forests began to deteriorate. Hunting also had important ritual meanings. The thick jungle on Parasnath hill in Hazaribagh was the scene of the annual hunting festival of the Santhals and other tribes. As a race the Santhals were well

imbued with a knowledge of the vegetable potions with which their jungles abounded. They were known to dip their arrowheads into a compound so poisonous that it could kill a full-grown tiger in half an hour.²⁸ After the ceremonial hunt, lasting up to three days, the Santhal held tribal sessions for dealing with charges against their *manjhis* (chiefs), as well as other matters of justice.²⁹ Thus hunting was closely associated with the structure and dynamics of community life.

Valentine Ball noted in the 1880s that he had frequently seen large numbers of men, women and children groping in half-dried-up tanks for *singhara* (water chestnut), fresh water snails and small sluggish fish. The latter were caught by dragging on shore the weeds in which they lay concealed. These items were very important in local diets for, as he pointed out, 'when compared with the cultivating *raiya*s they (the tribals) are less affected by famine for the jungles produce their ordinary food whether there is drought or an abundant rain'.³⁰ From these miscellaneous articles a dish was prepared.

Local food strategies helped to minimise the risk of drought and the people sought to live in relatively nutrient-favoured environments. When an enterprising cultivator made himself a new home in the jungles his first requisite was the presence of a perennial supply of spring water for drinking and cooking purposes. The next requisite was a valley which could be made into rice land and for this purpose he would avoid a stream too copious and impetuous and instead seek one that would assist him by bringing down a sufficient quantity of silt. In such ways, over the centuries, the hunting and pastoral way of life of most of the tribal communities had adapted to the needs of the more complex agricultural village communities of later days.³¹ The village lands were divided into 2 classes, *don* and *tanr*. The *don* lands were terraced lowlands on which rice only was grown, while the *tanr* were uplands which produced coarse rice and various *rabi* crops. Attached to each house, as in most Oraon villages, were *bari* lands in which a few kitchen vegetables, such as gourds and beans, were grown. In Dhalbhum, Hazaribagh, Palamau and the Santhal Parganas the villagers erected tanks and *bandhs* for irrigation. Palamau depended on reservoirs alone for the success or failure of the winter rice crop.³² However, in general artificial irrigation was poorly developed, probably because cultivation on the plateau was more rudimentary than among the settled lowland agricultural communities. By ancient custom *patras* or small scrub jungles of *sal* saplings were reserved for the periodical supply of wood for the domestic, agricultural and building requirements of village communities. For the Oraons of Chotanagpur their native jungles provided them with a number of edible roots, leaves and fruits, while the comparatively fertile valley of the central plateau provided them with rice and other cereals. In the Santhal Parganas, which belonged to the Bhagalpur subdivision, but resembled Chotanagpur botanically and topographically, it was reported that the cultivation methods of the Pahariyas of the Rajmahal hills were

simple and consisted mainly in sowing Indian corn, gram and sweet potatoes. However, they remained heavily dependent on wild foods found in the copious jungles and had thus successfully averted the the great Bengal famine in the 1770s by retreating further into the hills. Thus while thousands died in the surrounding low lands the people in the hills were able to subsist on jungle foods and so tide over the crisis.³³

In Chotanagpur, a symbiotic relationship had prevailed between the people and their forest for hundreds of years. The local cultural and aesthetic values that were encompassed within hunting, fishing and gathering activities also found expression in elaborate rituals and ceremonies that celebrated the natural world. For example the Mundas regarded the sun with awe and reverence and called it Sing Bonga. The worship of a rain god was also common among them and other tribes in Chotanagpur. More important, however, was the ritual significance of sacred groves. A *sal* grove was uniformly dedicated in every village to the forest gods whose favour was bought by sacrifice. The consecrated grove was religiously preserved, the young trees being occasionally pruned, although not a twig could be cut for use without the formal consent of the village.³⁴ It was also necessary to propitiate the spirits residing in the jungles who had been disturbed by the pioneer families who first cleared the trees, and it was the duty of the village to make periodical sacrifices to these spirits who haunted the forest and the wastelands.³⁵

Thus the rituals were intended to assuage the spirits disturbed by human intervention.³⁶ Every Munda village, for example, had its own particular spirit whose duty it was to look after the crops. Such spirits were known as Deswali and played a large part in Munda festivals which were connected with the cultivation of the land. The home of this presiding deity was the *sarna* or sacred grove, a little path of jungle that when all else was cleared for cultivation, was left as a refuge for the gods where they might dwell apart. At all seasons of the year offerings were made in the *sarna*, for on the favour of Deswali depended the success or failure of their crops. The other tribes, such as the Oraon, also had festivals connected with the sacred grove. Their chief festival was the Sahrul, which was observed with much ceremony in March and April. It occurred when the *sal* tree was in flower and its graceful plume-like blossoms decked the earth. All the villagers assembled at the *sarna*, where the *sarna burhi* or the 'woman of the grove' was said to reside. The festival began by sacrificing fowls before a rough image of mud or stone, which were then partaken of by all assembled in a general feast. At night the villagers returned home with *sal* blossoms and marched to the beating of the drums and the blowing of horns, with much dancing along the way. The following morning the village women, gaily decked with *sal* blossoms, carried baskets filled with the same blossoms which they placed over the door of every house for luck.³⁷ The sacred grove thus played a very important part in the local festivals of the tribal people.

LAND ALIENATION, DEBT BONDAGE AND THE EROSION OF
FOREST RIGHTS IN THE NINETEENTH CENTURY.

Up until the eighteenth century the people of the Chotanagpur forests pursued relatively undisturbed lives, at least in the remoter parts of the division. However, this does not mean that there had been no changes since early times. The Munda and Oraon tribes who first reclaimed the virgin jungle of Chotanagpur and settled mainly in Ranchi district had no idea of individual ownership of landed property. All land was in the joint ownership of a family or a group of agnate families. Each family made its own clearances which came to be called *hatu* (village) and later *khuntkatti*. Their organisation was patriarchal, the Munda, or founder of the village, being the chief both in secular and religious matters. A confederacy of about 20 villages was known as a *parha*, whose head was the *parha raja* or the *manki*. Gradually, but as early as the sixteenth century, this communal life style of the Mundas was being threatened. In course of time, a gifted and ambitious leader secured precedence over the other *parha* chiefs, acquired the authority of a chief and the title of king or *raja*.

The *rajas* soon became Hinduised and formed marital alliances with families long recognized as Hindu. Further Rajputs and Brahmins from Hindustan were invited to settle in the country and to assist the *raja* in his expeditions against neighbouring states or in controlling his vassals. They were rewarded with grants of land and began to dispossess the village communities. During the medieval period there was a considerable immigration of Muslims into the country, so that eventually villages composed entirely of Muslims were found scattered in Ranchi district. The *rajas* also succeeded in consolidating their power over the tribal population by introducing Hindu settlers on easy conditions. Such developments meant that the seeds of agrarian discontent had been laid long before the era of the British.³⁸ The northern districts of Palamau and Hazaribagh had been heavily overrun by Hindu immigrants even before the grant of Diwani to the British in 1765. The advent of the British in the 18th century only further increased the pressures on the tribal communities.³⁹ The pace of change was slower in the more remote districts of Ranchi and Singhbhum. Eventually, the tribes reacted to both pre-colonial and colonial interventions by starting a series of uprisings that sought to check the alienation of their traditional rights.

In 1765 the grant of the Diwani of Bengal, Bihar and Orissa to the East India Company brought the British to Chotanagpur and ended the relative isolation of the tribal communities. Colonial authority was gradually superimposed on the feudal authority of the *raja*. It recognized the tribal chiefs as *zamindars*, imposed a new system of taxation (including rent to be paid in cash, excise and other levies), set up markets and developed trade. A new class of middlemen between the administration and the people thus came into existence. This consisted of traders and merchants, moneylenders and farmers, who alone could meet the demand for money to pay taxes and repay debts. They soon became the hated

dikhus (foreigners), many of whom were granted tenures as *thikadars*. By the end of the nineteenth century these changes affected all the districts, including Ranchi and Singhbhum, where the rights of Munda and Oraon peasants were gravely threatened by the new breed of landlords. In many villages the proud Munda was reduced to an agricultural labourer.

During this period, landlordism came to dominate rural social relations in Chotanagpur with some important variations. In Hazaribagh and Palamau relations between the landlord and tenant had begun to resemble those that existed in the neighbouring south Bihar districts of Gaya and Shahabad and the rent demands were very high. In the southern districts of Chotanagpur, mainly in Ranchi, the situation was slightly different and the Mundas managed to hold on to their traditional tenures in some areas in the face of encroachment by landlords' *bakasht* lands (i.e. those on which occupancy rights would not accrue) which were usually the best rice lands in the village. In Palamau, by the time of the settlement reports of 1913-20, the proportion of the landlord's *bakasht don* to total *don* land was 30%, while in Ranchi in the Settlement years 1902-10 it was 14.8%. This had harsh consequences for the tribal peasantry. As a result of landlord harassment there was a large scale movement of the tribal population away from Palamau and Hazaribagh. By the time of the census of 1881 in Chotanagpur and the Santhal Parganas only 44% of the population was still classed as 'tribal'. In the northern districts of Palamau and Hazaribagh the original tribal population in 1901 was only 36% and 34% respectively, while in the more remote districts of Ranchi and Singhbhum it was 74% and 75%.⁴⁰ Between 1872 and 1881 the overall population in Chotanagpur increased from 3,147,699 in 1872 to 4,225,989 in 1881. However, the increase was mainly caused by the influx of immigrants while the tribal population actually declined in the province due to outward migration.⁴¹ The census of 1872 showed a lower concentration of tribal population in the northern districts of Chotanagpur. This was due to the large scale movement of the tribes, especially the Santhals from Palamau and Hazaribagh districts who migrated to the Damin-i-koh region in the Santhal Parganas and to Ranchi and Singhbhum districts. However by the latter decades of the nineteenth century, the changes had affected Ranchi and Singhbhum districts as well. A register kept from 1864 to 1867 in Ranchi district showed that in four years, 12369 men, women and children (or 1% of the total population) were recruited as 'coolies' to work outside the region.

Agrarian relations in the northern districts

In the northern districts of Palamau and Hazaribagh and in the Santhal Parganas increasing subinfeudation and the growing spread of debt bondage were the main grievance of the peasantry. In the Santhal Parganas, the main causes of distress were the grasping and rapacious *mahajans*, the misery of hereditary bondage, the unparalleled corruption of the police and the impossibility of redress in courts.

From 1832 the *munsifs* had decreed in favour of the *mahajans* who had often secured the most preposterous bonds. Time was never made the essence of the agreement and an arrowhead was carelessly scrawled upon the bond to represent the signature of the recipient of the dole who never read what he was signing. The bond was of such value that whenever the *mahajan* wanted his own fields prepared or crops cut he would immediately pounce on the poor Santhal and drag him to work. The Santhal's time was thus taken up looking after the *mahajan's* field without payment or fair remuneration, while his own land lay fallow and his crops rotted.⁴² The remedy for such oppression was to rise up in arms. When the *sal* branch, their signal for war, was 'passed by willing hands from village to village the whole of this race rose as one man against government, police and *mahajan*.'⁴³ The Santhal rebellion of 1851 developed in this way and spread dramatically all over the region. It was crushed with some difficulty by British troops who burnt and demolished many Santhal villages, destroying crops, and eventually starving the people into surrender.

In Hazaribagh district, in north Chatra, the Kherwar chiefs had held considerable areas of land on an inalienable *digwari* tenure. However these tenures gradually lost government protection and their Kherwar descendants were not able to hold their own against the *bhaban* landholders and the *bania* moneylenders. Their lands were soon alienated and they and the other Kherwars were reduced to poverty. As the tribals lost their lands, new settlers were introduced in the villages including lower caste Goalas and Kurmis.⁴⁴ The introduction of these new settlers soon changed the character of tribal villages. As the populations of Hindu lower castes grew, the tribals had to share their lives with Dusads, Chamars, Ahirs and others.

With the retreat of the tribes from the northern districts there was a continuous stream of immigrant settlers into these districts from adjoining Bihar. Many of the lower caste Hindu immigrants were as ruthlessly exploited by the *zamindar* as the indigenous inhabitants themselves and held lands either on very insecure tenure or were landless agricultural labourers. The alienation of tribal lands had already been affected by a ruthless attack on common property rights. Moreover, in the vast majority of villages in the district the rents which were being realised at the time of the settlement were illegal. Probably less than 25% of the villages in the whole district were found to be paying their legal rent. Rent arrears were commonly realised by the illegal distraint of crops and cattle and frequently by ejecting the *raiya*s from their holdings and resettling them with other tenants. Further *abwabs* (local landlord taxes) were levied which were simply extra burdens imposed on the *raiya*s in addition to their rents. On top of this, the *raiya*s were compelled to work on the landlords' *khas* (homestead) lands at certain critical times in the year. One result of all these exactions by the landlords was that the incidence of debt bondage rapidly began to spread in the districts. Peasants were often forced to borrow money from the landlord or money lender to meet local needs.

The system that developed as a result was known as the *kamiaouti* and led to the absolute degradation of the *kamias*. In practice the *kamia* was rarely better-off than a slave. He was usually paid in kind ($2\frac{1}{2}$ seers of unhusked paddy or $\frac{3}{4}$ seer of rice) and thus had little chance of paying back the principal of his debt and becoming a free man. The condition was hereditary with the debt passing on from father to son. Often daily work was not guaranteed by the master and no food was supplied on the days that there was no work to be done. Thus when there was no agricultural work to be done and the *kamia* had least chance of getting daily employment he was left to fend for himself. He was thus reduced to earning the most miserable subsistence by collecting fuel and grass for sale.⁴⁵ These were thus the groups most vulnerable to famine. In the north-west of the district in Hunterganj, Partabpur and Chatri the system was particularly bad and had completely extinguished the *raiyyati* population. A case study of the lives of nine *kamias* owned by the *babhan mahajan* Dumar Singh of Barapahari Pirtanr village serves to highlight the plight of these *kamias*. In this village Dumar Singh was the local *zamindar* and money lender. By gradually advancing small sums of money to the Santhal, Munda and Kharwar tenants under him, he and his ancestors had converted these tenants into slaves and reduced their holdings to tiny homestead lands. They were not allowed to absent themselves from their work and were totally tied to the landlord. As the cultivator was forced to throw his traditional caution to the winds in the face of landlord pressure so his vulnerability to scarcity increased.

Some of the poorest tribal peasantry migrated away from their homelands to work elsewhere. The new coal mines in Ranchi and Dhanbad found a cheap and abundant labour force among a dispossessed and impoverished rural population.⁴⁶ The opening of the coal mines often put an end to arable expansion as potentially cultivable land was taken over by the mines. This was most apparent in the open parts of southern and eastern Manbhum and in the Jharia coalfields. From its beginnings in 1820 until the 1880s the coal mining industry of Bengal grew in accordance with the needs of various departments of the East India Company which later came under crown rule. The industry centred in the large Raniganj field developed gradually with the help of government contracts for the establishment of an infrastructure for distributing coal to sea-going harbours and the bunkers of steamer stations along the Ganges. The second phase of growth of the coal industry that took place with the expansion of railways led to a great increase in the volume of production in the period 1860-1880.⁴⁷ The mining companies destroyed the landscape by blasting agriculturally fertile and even virgin plots. This left them useless, effectively in perpetuity, and dispossessed the peasants who had traditionally owned lands in the region. They then became the main source of unskilled under-paid labour in the mines. Labour also migrated to the Assam tea gardens, when the construction of the Bengal-Nagpur railway and the Jharia extension line enabled easy transit to new fields of employment. In the last quarter of the nineteenth century about 20,000 people

left Chotanagpur annually in search of employment elsewhere. The rapid loss of land by the tribals and the general collapse of their economies was an important element in the origins of migration.

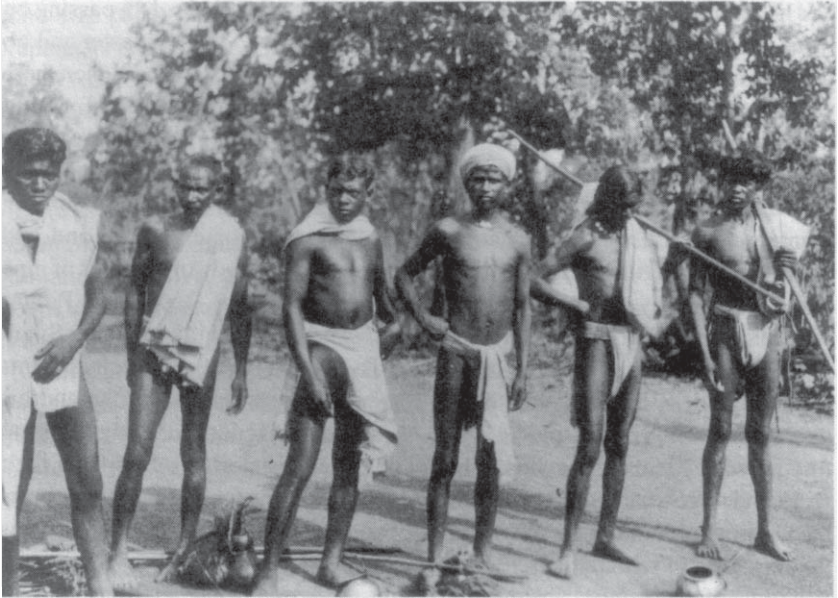


FIGURE 2

Oraon Coolies 1909 (From the Mansfield Collection in the Centre of South Asian Studies, University of Cambridge)

The effects of the developments of the last decades of the nineteenth century on the traditional rights of the tribes were catastrophic. With the increasing pace of change in Ranchi and Singbhum the whole region was laid open to outside intervention. By the end of the nineteenth century outward migration of the tribes from Ranchi district had increased. More than 91,000 persons born here were enumerated in Assam. Troubles between the landlords and tenants had also led to a movement of the population from the central plateau towards the south and west of the district.⁴⁸ Though the Census of 1901 recorded that the population in the district had increased by 5% this was mainly due to the influx of settlers and did not represent the real increase. As more lands came under the control of outsiders, tribal lands became the landlords' *bakasht* or privileged lands. The colonial state further aided this rapid dispossession of the tenantry. The establishment of East India railway colliery villages was ensured by throwing out

original occupancy tenants and replacing them with service tenants who were forced to render a certain number of working days in the coal mines on pain of ejection.⁴⁹ To meet the increasing rent demands changes in land use took place that were similar to those in the northern districts. Rice cultivation increased and the limits of cultivation were quickly reached. By the time of the settlement years in 1902-10, rice was grown in 62% of the total net cropped area. In the context of the growing destruction of forest rights, these changes were gravely to affect the traditional economy of the tribes.⁵⁰

Forest rights in the nineteenth century

In such a situation the fate of the traditional jungle rights of the tribal communities can only be imagined. These rights had always been vested in the village community. The indigenous tribes that first entered the Chotanagpur districts had found it covered with virgin jungle and had to clear land for cultivation. Jungle lands were abundant and each village community extended the limits of cultivation and cut timber for domestic and agricultural purposes.⁵¹ Later, a network of feudal chiefs imposed their authority on these lands and received a small tribute, but in no way dispossessed original settlers of their proprietary rights either in cultivated or uncultivated lands. In the early days, as the jungle land was still abundant, the landlords did not prevent the *rai'yats* from cutting the timber they required for their own use. Only when the timber began to gain marketable value did the landlords begin to assert their proprietary rights. By the end of the nineteenth century however, the landlords started exacting illegal jungle fees for these traditional rights. In Dalbhum, in Singbhum district, the Midnapur *Zamindari* Company had taken a lease of the *zamindars*' rights for 25 years and were levying a cess of six *pies* per Rupee of rent from all the *rai'yats*.⁵² In 1899 the Deputy Commissioner gave a useful account of the origin and the collection of the cess in his final report on the management of the estate. He recorded that the majority of the *rai'yats* did not accept the cess sanctioned by the commissioner in 1896. In some parts of the country, especially in *tarafs* Haldipukur and Kalikapur, the opposition was so great that it was necessary to entertain the services of four police constables to be paid out of the assets of the estate. In the Munda country, where the ancient system of land tenure survived in patches as the *khuntkati* system the whole body of cultivators were proprietors of the jungle and thus offered a tenacious resistance to encroachments from the *zamindars*.

Such instances of successful opposition to landlord demands were few, and in the rest of Ranchi district, the proprietary rights of the cultivators were under severe attack. In some cases the landlord exercised the right to sell and manage the jungle, subject to the right of cultivators to take wood; while in many others the *zamindars* had succeeded in establishing their extensive rights in the jungles, having deprived the cultivators of all rights as users. In areas where landlords permitted tenants to cut wood a complex system of customary forest rights was

found to exist at the time of the settlement operations. These only survived because tenants fiercely resisted attempts to extinguish these rights altogether. The tenants of such villages had the right to cut trees for the purpose of building or repairing houses for agricultural purposes. They had the right to graze cattle within the jungle and to collect fruits. All these rights, however, were subject to a quantitative limitation. The tenants could only take sufficient wood for domestic purposes. They were not permitted to fell certain valuable trees such as *mahua*, *asan*, *piasal*, *tetul*, *jam*, *am*, *kusum*, *palas* or *sal* beyond a certain girth. The process of landlord encroachments on the traditional forest rights of the peasantry was actually accompanied by the ruthless destruction of the forests itself. This further reduced the access of the indigenous people to their native forest environment.

In the nineteenth century much of this forest had suffered wanton destruction. The vast jungles which were once teeming with game now had few wild animals. Bradley Birt noted in 1909 that 'only a few years ago vast tracts of jungle had remained practically untouched in the division forming natural game preserves well stocked with tiger, leopard, panther and bear'.⁵³ 'But' he continued, 'Chotanagpur is no longer an unexplored district and there are few parts that have not been well shot over... Enormous tracts of sal jungle, moreover, have been cut down in recent years, exterminating large quantities of game.' H.H. Haines, recording the forest flora of Chotanagpur in 1910, noted that the larger plateaux of the region were under cultivation and in the dry season became a monotonous expanse of dried up fields with scarcely any vegetation, while the once jungle-covered scarps had been reduced to a state of scrub.⁵⁴ The rewards offered by the state to destroy tigers effectively decimated the population of these magnificent beasts in the forests. This was in line with the perceived policy of the colonial rulers to extend cultivation at the expense of forest tracts and to exterminate all wild and dangerous game.⁵⁵ Gun licensing was freely given by the state and the destruction of wild animals was encouraged by the grant of rewards (Rs 25 for a tiger, Rs 5 for a leopard and Rs 2-8 for a bear)⁵⁶ In the Santhal Parganas, E.G. Man reported in 1860 that where elephants and rhinos were abundant as late as the 1830s and 40s 'now the latter are extinct and of the former but three are left'.⁵⁷

In Ranchi, the district gazetteer recorded the unchecked destruction of forests in the district in the nineteenth century.⁵⁸ In 1883, Hewitt, the Commissioner at Ranchi, called attention to the rapid destruction of private forest and to the incalculable misfortune that would result from their wholesale destruction not only to Chotanagpur but to the Bengal districts lying below.⁵⁹ By 1885 Dr Schlich, the Conservator of Forests in Hazaribagh and Ranchi, had concluded that Ranchi district contained little forest. In the undulating plateau of Barwe, through which the Sankh river flowed, the country was devoid of jungle and most of the clearance seemed to have taken place in the last decades of the nineteenth century. Missionaries who had resided there for over 20 years remembered that dense forests had surrounded their stations when they first arrived.

In the 1882-4 survey of Chotanagpur estate (a *zamindari* estate) it was found that in 14 jungles surveyed the net decrease in the area of jungle was 11%. The decrease was exacerbated by the attitude of landlords who consented to land reclamation in return for *salami* and other government financial concessions. In Palamau the traditional sacred groves were disappearing under landlord encroachments. As early as 1860 Dr Royle recorded that he saw several new plantations in the *khalsa* or government villages where the trees were missing.⁶⁰ In Hazaribagh, a district that once contained extensive jungles, a rapid destruction of the jungles occurred. A notable result of the denudation (where the clearance of jungle was not accompanied by reclamation of the soil for cultivation) consisted in the dissection of the country into deep ravines which resulted in the affected tract being wasted for agriculture. It was reported by the settlement officer that the destruction of the jungle was affecting climate and rainfall and the scarcity of the scrub jungles was leading to the burning of cow dung as fuel, a practice that affected fertility as often cow dung was the only manure in fields.⁶¹ The state and commercial interests also encouraged the cultivation of *sabai* grass. This crop was cultivated extensively to meet commercial needs further destroying virgin jungle. *Sabai* was a wild grass used for cattle fodder and rope making. However it was valued principally as a pulp for paper manufacturing which made it a ready source of income for the state.

The major cause of the destruction of jungles in most districts was the sale or the lease of the forest to contractors for supply of railway sleepers. Entire forests were destroyed to supply the timber necessary for the railways. The forests of Singhbhum were subject to heavy fellings and it was reported in 1898 that the 'selection fellings for the supply of broad gauge sleepers from trees over 6½ feet girth amounted to over 20,921 trees at an average of 10.4 sleepers per tree'. These fellings were reported to have greatly impoverished the forests.⁶² Singhbhum was a district with the largest proportion of forest in the 1880s and with over 80% of its population still tribal. This was now particularly threatened by sleeper cutting.

In Ranchi district, by 1910, over-exploitation by contractors was obvious in Biru, Basia, Bhaunpahar and Tamar thanas. These areas were mentioned by Dr Schlich in 1888 as containing important *sal* forests. The opening of the railway to Ranchi and Lohardaga and the improvement of communications by road led to the sale of jungles previously untouched. Thus the most important cause of the wanton destruction of the Chotanagpur forest in the nineteenth century was the operation of private capital which was instrumental in the felling of many thousand acres of magnificent forests for the railways. Coupled with this landlord encroachments on village jungles and the sale of timber to outsiders further exacerbated the destruction of the jungle.⁶³

While all this was going on the colonial administration continued to argue that traditional forest use seriously exacerbated the destruction of the forest. It was said that peasants were continuing age-old practices which had scarcely

harmed the forest when it was in abundance, but now only further threatened its destruction. *Jhuming* (shifting cultivation) was also said to threaten jungles in remoter parts of the district. District officers commenting on the 'wasteful habits' of the local peasants noted that often a large tree was felled to make a plough or a door post, or even to secure honey at the top. Another form of waste was the indiscriminate cutting of *sal* saplings to make a fence around the house. Over-grazing and firing of the undergrowth were said to be further causes of deforestation. Local needs, however, counted for little compared to the destruction of the forest by private capital interests. The harm to the forests through *jhuming* was, in fact, comparatively insignificant and firing of the forests was not necessarily harmful.⁶⁴ The activities of the Kharia tribe in Dhalbhum, for example, were heavily criticised by administrative officials. It was reported that these tribes, who lived on the fruits available from trees and jungle produce, raised a few precarious crops on patches of jungle which they cleared for the purpose by burning the trees. After reaping their harvest, they shifted to another area of jungle and returned to the same patch after 8-9 years. Interestingly, the writers of the Settlement Report in 1906 were forced to concede that the destruction wrought by such methods accounted for only a small percentage of the deforestation of Dhalbhum.⁶⁵

In spite of this the government and the forest department still embarked on a wholesale programme of forest reservation and exclusion. This state programme had a far-reaching impact on the lives of the local people. In many places the landlord and the state had long battled with each other to secure large areas of jungle land, extinguishing the traditional common rights of the people. Under company rule, the question of common rights was never really raised in the region, let alone understood. Under the Permanent Settlement of Bengal, all such rights had been transferred to the landlord under the terms of the Fard Rewaz Jungle Measure, to enable such lands to be taxed. The landlords then proceeded, wherever they could, to extinguish peasant rights to common property resources (which included forest and grazing lands and fish tanks) and began to charge the peasants for the privilege of using them. All through the latter half of the eighteenth century and into the early nineteenth the landlords had effectively been privatising large areas of the common lands in Bihar. Aided by a wilfully blind colonial state, common rights were almost entirely negated in several parts of the region. In Hazaribagh district, the English managers of the Dhanwar and Dorander estates, for example, between 1864 and 1900, set themselves firmly against peasant customary claims to trees. Such developments were common in several villages. Only very late in the day, in 1914, the settlement reports started to underline the importance of recognizing these customary rights, pointing out that, hitherto, tenancy law in Chotanagpur had ignored their existence and admitted that 'fifteen years ago the very talk of customary rights would have been poo-phooed by the civil courts'.⁶⁶

In Ranchi district, several of the landlords looked upon the jungles as a providential asset to be exploited for payment of debt.⁶⁷ They were prevented

from fully exploiting this asset only by difficulties of communication, so that the more remote jungles survived. However, most of the latter were taken over by the state for forest reserves. By the 1890s the total area of reserved forest in Chotanagpur was 5839 sq miles. Of these over 5431 sq miles were closed for grazing purposes. In 1894 all state lands within the five districts of Chotanagpur division were declared to be 'Protected Forest', further controlling hitherto unclassified forests. Where patches of jungle survived the grip of both state and the landlords the spread of the railway system further aided the process of destruction. The opening up of the Purulia-Ranchi railway and the main Bengal-Nagpur line, fringing the southern portion of Gumla sub-division, led eventually to the total deforestation of this hitherto untouched region.⁶⁸

The indigenous people of Chotanagpur were thus stripped of almost all their forest and common rights by the activities of the state and the more rapacious landlords. At a very basic level, the newcomers had little respect for the spirits that haunted the forests and their traditional lands. Far from propitiating them, as the pioneering Munda and Oraon settlers had done, this destruction had no limits. The ancient spirits, it was said, were being hounded out of their homelands by the piercing whistle of the new railways and the drone of the saws of the timber trader.⁶⁹ Such changes had catastrophic effects on the physical and mental lives of the people.

THE FAMINE 1896-97

There is no record of famine in early times

(Ranchi District Gazetteer)

Horrible death from hunger prevails

Oh! for the days when men knew no cares, but drank their fill of home-brewed ale

Woe to this age when men on earth below

Do daily die of famine .

(Munda song recorded by S.L. Roy in the 1900s)

In Ranchi district there had been severe droughts in 1820, 1823, 1827 and 1837. In none of these years had the distress been sufficient to cause famine. Even the great famine of 1866 did not greatly affect the subsistence of the district.⁷⁰ In the other districts, where the effects of economic and ecological changes were beginning to be seriously felt by the 1860s, the 1866 and the 1874 events did cause some distress mainly where the pace of change was most rapid, particularly in Palamau. In the 1860s coarse rice prices rose in Chotanagpur to the unprecedented level of 11½ seers to the rupee; but though the pressure of scarcity was felt to some extent, there was no actual food scarcity except in one or two places. The main areas affected were the lower regions of the plateau below 500 feet in Manbhum and Singbhum and, as V. Ball noted presciently in 1867:

people living in jungle villages are more independent and less affected by famine than those who reside in the centre of cultivation and have no access to jungles. Were a census to be taken it would probably be found that the relative proportion of deserted houses of villagers as a result of famine to those still inhabited is greater in the open cultivated area than in the dense jungle.... indeed the jungles can be regarded as the saving of the lower races of the population.⁷¹

In 1873 the rains were late, so that only a portion of the *bhadoi* was sown. Resulting distress was confined to Palamau in the Five Parganas and a bumper crop of *mahua* and jungle fruits in 1874 served to mask any apprehension of more serious problems. A gazetteer later recorded that the past history of the area had led officers to the conclusion that famine need not be anticipated in the district. However, the report noted 'subsequent experience had shown this conclusion to be false for since 1888 there have been three famines, in 1896-97, in 1899-1900 and in 1907'. 'It is possible', the report continued, 'that the destruction of forests has led to a decrease of jungle products and this deprived the people of one of their chief means of resistance to famine'.⁷²

In 1897 the belief that the region was immune from famine was finally dispelled. This time all the districts reported distress and it was recorded that the sufferings of the people were great. The famine developed in the context of a failure of the monsoon, a not uncommon event but one that had grave consequences in the context of the changes.⁷³ The preceding decades of deforestation, demographic pressure and land use change had finally pushed a relatively stable economy into a crisis. Many of these changes had occurred, as we have seen, as a result of exploitation by a new landlord class. The traditional economy could no longer cope with periods of scarcity. The careful husbandry and elaborate social and cultural systems of security designed to counter periodic subsistence crisis had been finally destroyed.

The harvest in 1895 had been deficient and in 1896 the monsoon was weak in August and September. The rainfall was badly distributed and affected the *bhadoi* crop. The whole district was affected and the rice crop was greatly reduced. At first no apprehension of serious distress was entertained and the only relief measures undertaken in April, May and June consisted in the opening of a few relief kitchens at Ranchi and Lohardaga and work on the Bundu-Silli road. The price of rice had, however, been steadily rising. In the second half of October 1896, it had arisen from 11 seers to a rupee to $9\frac{1}{2}$ seers. From February 1897 it had risen further from $6\frac{5}{16}$ seers in June to $5\frac{6}{16}$ seers at the end of July, when in many markets only 4 seers could be obtained for the rupee. Immediate relief works had to be undertaken in an area of 700 sq miles south-west of Ranchi, the worst tract being one of 100 square miles, west of the unfordable Karo river in Laping, Baria and Sisai. Test works were opened, but the district officers noted in perplexity that they failed to attract labour as 'the people preferred to support life on a meagre diet of jungle products, without working, to obtaining a ration insufficient to compensate them for the expenditure of physical energy.'

FAMINE IN A FOREST TRACT

In fact, it was quite clear that the local people were attempting to cope in the way they best knew how; by resorting to the products of the forest.⁷⁴ By mid August, the sufferings of the people had increased. The jungle foods which they had always depended on had been severely depleted. The little that they could procure now was not enough to sustain them. Once, they could have lived comfortably on a diet of *mahua* flowers and roasted *sal* seeds supplemented with small fish and water chestnuts. Many of the *mahua* trees were now in the private hands of the landlord or were in reserved forests. The central and eastern plateau where once the best *sal* forests had been found were denuded and only small scrub jungle remained. Enfeebled by a low diet of limited jungle produce the people fell prey to various diseases, but mainly to cholera. It proved to be a devastating killer. In August and September alone the mortality was 21.18 per square mile.⁷⁵

The onset of the famine in most of the districts was relatively slow. In November 1896 district officers reported that Hazaribagh was the only district that gave cause for anxiety and that the remaining districts would tide over until the next season without special relief measures. The growing distress was however revealed by an increase in emigration to Assam and a rise in the number of beggars in Hazaribagh.⁷⁶ Dr Nott, the civil surgeon in the town, reported that a number of the coolies he examined for emigration purposes were very emaciated and were on the edge of starvation.⁷⁷ In practice migration by the poorest and most vulnerable rural strata was one of the commonest survival strategies adopted in time of drought and famine. Migration to the Assam tea gardens had increased over time from Chotanagpur as patterns of life were disrupted.⁷⁸ However this time they were too weak even to migrate. By the end of November the district officer in Palamau was calling for the opening of the reserved forests in the district to help relieve the distress of the people by giving them access to *mahua* flowers.⁷⁹ This early proposal to alleviate distress by opening the reserved forests in the provinces to the people was however delayed by bureaucratic bunglings. At first A. E. Wild, Conservator of Forests, objected to the proposal on the grounds that the collection of *mahua* flowers threatened forest fires, it being the custom of the people to clear by fire a space under the tree upon which the flowers were dropped to render collection easier. As the government debated the issue forest offences mounted all over Chotanagpur. In Kurchuta reserve in Hazaribagh district heavy fines were imposed by forest authorities for such offences.⁸⁰

As the scarcity intensified the state reluctantly set in motion a system of famine relief. In the worst affected tracts of Hazaribagh it was reported that relief works would be started under Section Two of the Famine Code and that the Deputy Commissioner would be strictly guided by the provisions of the code in fixing and regulating the rate of wages and quantity of work. This hesitancy in instituting relief was in line with British famine policy which, throughout the nineteenth century, remained stubbornly subordinate to the development ethos.⁸¹

The Famine Commission of 1880 has been credited with the framing of the 'modern' policy of famine relief administration. Actually the Commission supported the bare subsistence principle by instituting large relief works, putting labour tasks and distance between the famine victim and a grain ration, restricting village relief to the helpless and avoiding policies that intervened in the social order. The commission strongly believed in free trade and Malthusian values. It had failed to intervene in the grain trade and stressed that demoralisation would result from the 'excessive distribution of charitable relief'. As Klein notes, the 'new codified famine policy was tested in the blitzkrieg famines at the end of the century. It was found most wanting and least able to save lives where the code was applied in orthodox terms. People perished in the greatest numbers where local officials were most suspicious about distress and most restrictive in offering relief, or villagers were least able to take relief at large distant works.'⁸² A new urgency was imparted to the Malthusian doctrine by the rash of famines and subsistence crises that broke out after 1860. Couper's memorandum on famine explicitly viewed the problem as a Malthusian one. Famine, he said, was a positive check and the support of the needy would stretch the wage fund of the country while also sponsoring continued reproduction and labour immobility. This was an echo of Malthus's argument on the old poor law. While Couper's argument was not practically accepted famine relief did take on a Benthamite hue with relief being associated with degrees of need and a requirement to work.⁸³

In some relief works the stupidity of the administrative officer prevented them from working efficiently. In Palamau in March 1897 a circle officer in charge of a project on which nearly 2000 workers were being employed closed the work for four days because money had run short. In this case it was not necessary for him to stop work as he still had sufficient rice with which to make payments.⁸⁴ In April 1897 the task work rates in Palamau were reduced as the administration was worried about paying too much. The district officer reported that this was in 'regard to the continued absence of anything like a rush in Palamau, and to the fact that the people have jungle products to help them and get their fuel for nothing'. This was, of course, in line with current government thinking on the inadvisability of encouraging the people to live off the state.⁸⁵ However, no account was taken of the fact that in reality the inhabitants of Palamau had few jungle products to fall back on; the most affected tracts lay in the southern half of the district and one that was most deforested.⁸⁶ Even the establishment of relief kitchens was regarded as rather wasteful as 'the inevitable result of opening a kitchen in any place is to throw all the beggars of the locality on our hands. People who previously supported these beggars consider their duty ends when the "sirkar" intervenes'.⁸⁷ As the scarcity intensified some *zamindars* had opened private relief works. In Tori Pargana the Maharaj Kumar opened 12 relief works. This exemplified the way in which fear of organised crime and grain looting had led many *zamindars* to provide relief.⁸⁸ However, the efforts of private relief agencies and the state combined were still too limited to have much of an impact.

The district officer in Hazaribagh district, reporting on the growing scarcity, noted observantly that the degree of intensity of the famine would vary with regard to the availability of jungle produce. He therefore identified the areas most likely to be affected as the thanas that lay along the Grand Trunk road on the lower plateau namely; Bari, Chouparan, Bagoda, and parts of Koderma and Dumri, all of which were substantially deforested areas.⁸⁹ The *mahua* crop, the officer commented, was exceedingly important for averting scarcity but only if it was 'evenly distributed'.⁹⁰ This was certainly a forlorn hope in conditions where landlord and state intervention had already resulted in a large percentage of the *mahua* crop going into private hands. These fears were repeated in Manbhum where it was quite clear that the stocks of *mahua* and *rabi* rice would 'of course not be equally divided' for, as the report went on, 'many of those who have the stocks, such as *zamindars* and the more well-to-do cultivators, will keep them for their future use, or possibly for sale outside the district, and there will thus be a deficiency of food for the poorer strata of the population'.

One local *jagirdar* in Tori Pargana in Palamau was found to stock 700 maunds of paddy while the rest of the villagers were suffering from acute scarcity.⁹¹ Another local *zamindar* was reportedly seen transporting 484 pack bullocks of paddy rice to Mirzapur district and to Shahabad as prices were higher there.⁹² It was also reported that the *zamindars* were exporting greater quantities of *mahua* than ever before outside the district. These exports reduced the stocks to be distributed among the starving people even further. Sometimes the local people were able to force the *bania* who was hoarding stocks to surrender some of his supplies. In Lohardaga, once the scarcity deepened, crimes were reported to be on the increase and in one of them the local *mahajan* had been attacked for failing to make advances of grain.⁹³ In fact, it is important to note that the first onset of scarcity in any famine situation was accompanied by a sudden increase in crime.⁹⁴ Grain looting was one of the commonest forms of collective action in the face of threatened food shortages. The element of protest was very strong and many initial acts of looting were expressions of anger at the conduct of the traders. In Lohardaga in several cases *bhandars* or granaries were broken into by gangs of villagers. Such looting was important, in that it prompted the intervention of the state. In Toto and Sisai thanas, for example, where crime was most common, the district officer immediately prepared to open test works.⁹⁵

The parts of the population most severely affected by the scarcity were those with no holdings who had been dispossessed over time. These included not only *adivasi* (tribal) labourers but also Hindu low caste agricultural workers such as Chamars, Dusadhs and others. In 1891, C. J. O'Donnell, forwarding his report on the census in Bengal, had found that in Chotanagpur division the percentage of field and general labourers was about one quarter of the population. These were the sections that were most affected by famine,⁹⁶ as identified by one Rakhil Das, the general manager of a local estate, who met some starving labourers while travelling from Purulia to Gobindpur. In Kaladi village he reported that several landless labourers (whom he named Narir Jala, Natea Jala, Birsa Majee,

Nando Lal Ghose and Gora Tuxi) had approached him for work. Some of them were living on a diet of *lata*s roots, the only available jungle product they could find. In Bakardi village, where an early starvation death was reported, the story was a starkly simple one and one that was to be repeated over and over again. The deceased, Hira Mahali, had been reduced to begging, where once he had eked a livelihood by working on the landlord's bamboo plantation. He had to support his father, step mother and her children and was gradually growing weaker. The day before he died the local money lender had called by at their hut to ask for a rupee they owed. Hira handed over a *thali* (plate) they had as payment and entered his house. He did not come out again. He laid himself down for two days and then died.⁹⁷ In Heraphoo village, in the Tori pargana of Palamau district, where the 21 households all belonged to Oraons, it was reported that the stock of rice were very low and that the women were foraging far and wide for edible plants. In most of the cases while the men migrated in search of work, women and children were left to forage for food.

The government made some relatively feeble attempts to encourage the import of rice to areas of scarcity and to depute special officers to engage carts to transport grain from Gaya and Shahabad. These efforts, however, were bogged down with difficulty for it turned out that such carts were not easy to procure, and very expensive owing to the demand for them created by the railway works in progress in Gaya district.⁹⁸ Often, as in Palamau, all consignments of imported rice were bought up as soon as they were exposed for sale by pack-bullock traders from the interior of the district who immediately proceeded to hoard it.⁹⁹ By January the retail price of common rice in Palamau had shot up by 40%. The rise in the prices of other food was also considerable. *Makai* (Indian corn) had shot up from 30 seers a rupee to 10, a rise of 67% while *mahua* had shot up from 60 seers a rupee to 20 seers, a rise of 63%.¹⁰⁰ The reason for the rise in *mahua* prices was the bad crop due to inclement weather. The mango crop on which the local people depended heavily had also failed in several parts, as at Lohardaga. Jungle products, such as roots, fruits and edible plants had, as we noted earlier, become exhausted due to the depletion of forests (and any further reduction in the available produce from trees had grave effects on the local economy).¹⁰¹ A temporary relief was nonetheless reported with the collection of *mahua* in March and in areas like Palamau by people gathering *lac*, in *lac* harvest time.¹⁰²

By May, the numbers on gratuitous relief began to increase rapidly, especially in Manbhum and Hazaribagh. In Manbhum there was an increase from 4076 adults on 24 April to 9874 adults on the 29th of May.¹⁰³ This was frowned upon by the local authorities, and soon after this attempts were made to substitute the kitchen system for the dry-dole system and by the district officer insisting that work be available for all persons fit for light labour near each relief centre.¹⁰⁴ It was reported that women and children in distress continued to forage, albeit largely unsuccessfully, for forest roots and fruits.¹⁰⁵ It was the same in Hazaribagh where the continued reliance of the local people on jungle products was widely

reported. The numbers on the relief works depended, of course, on whether the local people could procure such foods.¹⁰⁶ In Lohardaga, district officers reported that distress had reached critical levels by May and that the chief cause of the distress was the failure of the *mahajans* (to whom the people habitually looked for loans of grain at that time of the year) to grant the usual loans as they preferred instead to sell at the prevailing high prices.¹⁰⁷

As the months of scarcity had progressed the deaths recorded from starvation continued to be low and elicited suspicions, in some districts, about the reality of the figures. It was reported that little trust could be placed in them as the registration of births and deaths throughout the division was most deficient and 'that the results shown are probably half the real figures, and the variations from year to year are such, in these circumstances, as to make it apparent that no reliance can be placed in them'.¹⁰⁸ However by March 1897, in Manbhum and Hazaribagh, cholera and smallpox deaths were reported for the first time. By May, a serious epidemic of cholera had broken out in and around Ranchi. In Hazaribagh a cholera epidemic was declared by July 1897 and in one month alone there were 1500 reported deaths. Fever and dysentery also increased the death-rate to a very considerable extent, clearly highlighting the levels of malnourishment among the population.¹⁰⁹ There was then an increase in the death rate in all the districts in August. While much of the increased mortality was due to the cholera epidemic, the death rate continued to increase despite the deaths from cholera falling off. This, as Andrew Forbes admitted, was due to the general 'lowering of the system' among the labouring classes owing to the want of proper food and the consequent diminished resistance against disease.

This was clearly established in Palamau, where peasants affected by famine were imprisoned in Daltonganj jail for committing petty crimes. Many of them died in prison with famine-related diseases. A doctor examining the dead in the prison reported that they were generally very weak and suffering from low vitality due to starvation and that 'they were mostly mere skeletons, simply skin and bone and they would have died much earlier outside the jail'. He went on to report that 'since July, I have had 215 admissions of under-trial prisoners. Out of these 109 were in bad or indifferent health and suffering from the effects of famine and starvation; enlarged spleen, anaemia, chronic dysentery and cholera'.¹¹⁰ The hesitancy of the local people to work on relief works had been apparent throughout the period of scarcity. In the early stages of the scarcity, the local population had evaluated the benefits of the meagre rations they would receive from working on relief projects and decided that it would barely compensate them for the expenditure of physical energy. They preferred to depend on the time-honoured methods of foraging for jungle foods even though, as it transpired, their traditional nutritional sources were soon exhausted. In the later stages of the scarcity they did, however, trickle back to work on relief works.

However, the blindness and utter insensitivity of the state apparatus to the needs of the people was most clearly revealed in August 1896, when in the midst of an increasing death rate caused by famine related diseases, Andrew Forbes,

the Commissioner of Chotanagpur division, ordered many of the relief works to be closed by the end of the month. This unhealthy haste resulted from the belief that the coming harvest would ease the situation and, as he declared, 'the inference (of the limited numbers on relief works) is that there cannot be much real distress'. In response to this absurd suggestion the Deputy Commissioner of Palamau protested vehemently, arguing 'that to close the works would simply mean to cast off 3000 or 4000 people, probably more, to die of starvation'. Despite these protestations he was ordered to reduce the works by half and to further reduce the rates for piece work.¹¹¹ That this haste was in no way warranted was revealed when, in Manbhum, works which had been ordered to close saw a sudden upswing in numbers from 8000 to 17000 in one week in September. The failure of the *bhadoi* crop was responsible for this sudden increase in distress¹¹² and here the works were reopened. However, in other places, the works were permanently closed. In Palamau government relief operations were suspended on 31st August. In Lohardaga and Hazaribagh relief works and gratuitous relief by doles were closed on 31st August and 4th September. These were all closed on the erroneous presumption that with the harvest the situation would ease, despite reports to the contrary, such as that from Reverend Campbell in Ranchi, who noted that there was still no local produce on sale in the bazaar and that the *mahua* was selling at over 3 Rs 5 annas per maund and that, even then, only a very small quantity could be had at this rate. Thus long before the situation had eased the works had been closed and the people left to fend for themselves.

The recovery from the famine was slow and painful. It was only by the end of the year that conditions improved and food stocks were replenished by *mahua* and early *bhadoi* rice and *gondli*. The death rate improved more slowly as cholera passed away. No accurate mortality figures were recorded but there is no doubt that many had died. Though the peasant economy recovered the fear of famine did not die away. Indeed, it was to become a recurring feature in Chotanagpur and was to strike the region again in 1899 and in 1907. Moreover, the more frequent incidence of scarcity after 1897 suggested that agrarian misery actually continued to deepen.

The circumstances of the 1897 famine in Chotanagpur are, I think, highly instructive. We have seen that, in sharp contrast to many other parts of lowland India where populations had long been subject to serious famine, the onset of chronic famine had never before developed in the forested areas of Chotanagpur. This was because a reliance on a diversity of forest products had ensured that droughts did not cause famine in the pre-colonial period. However, once deforestation did start to take place (in the context of the exploitation of the indigenous people by an outsider landlord class, aided by the colonial state) and the forest department denied tribal people access to traditional famine foods, Chotanagpur found itself, for the first time, subject to the kind of vulnerability to famine that had affected lowland populations for a much longer period. A fine balance between people and environment had been critically destabilised as a

direct consequence of the penetration of a western economic system into the deep forest regions in the wake of the economic and forest policy changes of colonial rule.

As a direct result of this the sustainable economy of the tribal peoples, and above all their resistance to drought and famine, had become permanently disrupted. They then became more vulnerable to the inroads of rapacious landlords, moneylenders and private capital in general. While similar developments took place throughout the colonial (and post-colonial) period in many parts of 'tribal' India the ecological background to the 1897 Chotanagpur famine throws useful light on the very sharply correlation between ecological degradation, forest reservation and the onset of famine conditions. Historically, too, the ecological subversion of tribal society initiated a process in which the tribal peoples of Southern Bihar were increasingly denied almost their entire entitlement to the resources of the region, a process so alienating and distinctively oppressive as to forge the foundations and motivations for a separate political identity in a putative 'Jharkhand' state much later on.

NOTES

¹ Lance Brennan argues that behind the famine of 1896-97 in Nadia district in Bengal lay a series of ecological disasters including the desiccation of some of the Ganges distributaries and depredations on population caused by epidemics of malaria (linked to stagnant water from atrophying rivers and railway embankments); See Lance Brennan, Les Heathcote and Anton Lucas, 'The causation of famine: a comparative analyses of Lombok and Bengal, 1891-1974', *South Asia*, vii: 1, 1984 pp. 1-26.

² e.g. See Michelle Macalpin, *Subject to famine: food crisis and economic change in western India, 1860-1920*, Princeton, 1983.

³ According to the telegraphic report of the week ending 25th September, the price of rice increased from 12 seers to the Rs in July to 6-10¹/₂ seers a Rs in Palamau, 8¹/₂ seers in Manbhum, 7-7¹/₂ seers in Hazaribagh, 8 seers in Ranchi and 5¹/₂-16 seers in Lohardaga which was higher than any previous existing price.

⁴ *Selection of papers relating to the famine of 1896-97*, Calcutta, 1898 (hereafter *Famine Report*) vol xii.

⁵ See Alexander De Waal, *Famine that kills; Dafur, Sudan 1984-85*, Oxford, 1989, pp. 32-33.

⁶ *Famine Report*, vol 1, p. 108.

⁷ For Africa there are a few studies which examine this; See for example, J. Iliffe, *Famine in Zimbabwe 1890-1860*, Harare, 1989, p. 65.

⁸ H.H. Haines, *The forest flora of Chotanagpur*, Calcutta, 1910.

⁹ See *Akbarnama of Abu-l-Fazl*, translated by H. Beveridge. See also Irfan Habib, *Atlas of the Mughal empire*, Aligarh, 1982.

¹⁰ *Ranchi District Gazetteer*, Calcutta, 1917 p. 10.

¹¹ Bradley Birt, *Chotanagpore: a little know province of the empire*, London, 1910, p.18.

¹² Walter Hamilton, *A geographical, statistical and historical description of Hindustan and the adjacent countries* vol 1, London, 1820.

¹³ Other important trees included *mahua*, *asan*, *palas*, *karam*, *tund*, *paisal*, *shisam*, *kusum*, *bair*, and *ficus* trees of different types.

¹⁴ On the importance and value of the *sal* tree see Throup, *India Forest Memoirs*, Calcutta, 1909, p.22.

¹⁵ Valentine Ball, *Tribal and Peasant Life in nineteenth century India*, p. 90. It can be argued that jungle products alone were not sufficient to provide enough nutrition for the local people and that these had to be supplemented with rice. However it is important to note that rice and other grains were often procured by trading jungle products.

¹⁶ H.H. Haines, *The forest flora of Chotanagpur*, p.41.

¹⁷ *Asiatic Researches*, 1798, vol 1, p. 300.

¹⁸ Walter Hamilton, op. cit., p. 284.

¹⁹ It is important to point out that even the seeds of the mango tree were softened by steam and eaten in times of famine.

²⁰ For details of the various plants found in Chotanagpur see H. Drury, *Useful plants of India*, 1881 and H. H. Haines, *The forest flora of Chotanagpur*.

²¹ See J. F. Dastur, *Useful plants of India and Pakistan*, Bombay, 1964.

²² E. G. Man, *Santhal and the Sonthalias*. .

²³ Final report on the survey and settlement report of Palamau district, 1894-95 to 1896-97.

²⁴ Valentine Ball, *Tribal and peasant life in nineteenth century India*, Appendix E.

²⁵ V. Ball, 'On the jungle products used as articles of food by the inhabitants of Manbhum and Hazaribagh', *Journal of the Asiatic Society* xxxvi no. ii, 1867 p. 73-82.

²⁶ Survey and Settlement report in Palamau district 1894-95.

²⁷ These resources often helped to tide over distress periods as they could be traded for grain.

²⁸ E.G. Man, op.cit.

²⁹ At a later period these rights were challenged by Jain traders who believed the hill was sacred and the taking of life on the hill abhorrent to their religious faith.

³⁰ V. Ball, *Tribal life in India*, p. 20.

³¹ See S. L. Roy, *The Oraon of Chotanagpur*, Calcutta, 1915 p. 180.

³² Final report on the survey and settlement of Palamau district in Chotanagpur, 1894-95, 1896-97.

³³ Thomas Shaw, 'The hills near the Rajmahal in Bhagalpore', *Asiatic Researches*, vol iv, 1798.

³⁴ *India notes and queries*, vol ii, 1892, p. 95.

³⁵ See S.L. Roy, *The Oraon of Chotanagpur*, p. 108.

³⁶ For these and other rain making ceremonies to propitiate angry gods see, *North India notes and queries*, vol 2 and 3.

³⁷ Bradley Birt, *Chotanagpore*, pp. 42-43.

³⁸ See K. S. Singh, *Birsa Munda and his movement, 1874-1901: A study of a millenarian movement in Chotanagpur*, Delhi, 1983 p. 2.

³⁹ Ranchi District Gazetteer, p. 25.

⁴⁰ Statistics quoted in H.H. Haines, *The forest flora of Chotanagpur*. .

⁴¹ W.W. Hunter, *A statistical account of Bengal*, London, 1877, p. 59.

⁴² E.G. Man, *Sonthalia and the Santhals*.

⁴³ *Ibid*.

⁴⁴ Survey and Settlement operations for the district of Hazaribagh.

⁴⁵ Survey and Settlement Report for the district of Hazaribagh.

⁴⁶ See Deltel Schwerin, 'The control of land and labour in Chotanagpur 1858-1908' in

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Dietmar Rothermund and D.C. Wadhwa, eds., *Zamindars, mines and peasants: studies in the history of the Indian coal field and its rural hinterland*, Delhi, 1978.

⁴⁷ See Henner Papandiek, 'British managing agencies in an Indian coalfield' in D. Rothermund and D.C. Wadhwa, eds., *Zamindars, mines and peasants: studies in the history of the Indian coalfield and its rural hinterland*, Delhi, 1978 pp. 165-166.

⁴⁸ E.A. Gait, *Census of India, 1901, vol vi, part 1, Report*, pp. 24 and 118.

⁴⁹ Survey and Settlement Reports for Ranchi and Hazaribagh.

⁵⁰ Ranchi Settlement Report, p. 111.

⁵¹ Ranchi Settlement Report, p. 128.

⁵² *Final Report of the Survey and settlement operations in Singbhum district*, p. 51.

⁵³ Bradley Birt, *Chotanagpur, little known province of the empire*, p. 82.

⁵⁴ H.H. Haines, *The forest flora of Chotanagpur* p. 3.

⁵⁵ See Reports on the administration of the Forests of Bengal 1893-1897.

⁵⁶ Ranchi District Gazetteer.

⁵⁷ E.G. Man, *Sonthalia and the Santhals* .

⁵⁸ Ranchi District Gazetteer, p. 121.

⁵⁹ See 'Forests of Chotanagpore' in *Indian Forester* 10, 1884, pp. 590-91.

⁶⁰ Royle's paper quoted in Indian Office Library (IOL) Home: Pub 2nd Sept 1859 file 27/32.

⁶¹ Final report on the survey and settlement operations in the district of Hazaribagh 1908-1915, by J. D. Sifton (Patna 1917) pp. 3-4.

⁶² Annual progress report of the forest administration in Bengal, 1898.

⁶³ Ranchi District Gazetteer. See IOL Home:Pub, 2 Sept 1859, file no, 27/32.

⁶⁴ For a more detailed treatment of the effects of shifting cultivation see Chandran, in Grove, Damodaran and Sengwen (eds) *Nature and the Orient: Environmental history of south and south-east Asia*, O.U.P., in press.

⁶⁵ Final report on the survey and settlement operations in pargana Dhalbhum., Singbhum district, 1906-1911.

⁶⁶ Survey and settlement report, Hazaribagh.

⁶⁷ Ranchi Survey and Settlement report.

⁶⁸ Ranchi Survey and Settlement report.

⁶⁹ The santhals of the Santhal Parganas had viewed the railways as evil and demonic. In a similar fashion in south India, famine was specifically linked to the ecological and administrative changes associated with British rule. In Madurai, in Tamilnadu, the local peasants attributed famine to the disturbing activities of the survey department and to the railway which had stopped the rain by the 'skies taking fright at the thundering noises of the locomotive'. See David Arnold, 'Famine in Peasant consciousness and peasant action: Madras 1876-78' *Subaltern Studies*, vol.3, Oxford, 1983.

⁷⁰ Most of the famines mentioned coincided with the incidence of strong El Nino/Southern Oscillation events. See Grove, in Grove, Damodaran and Sengwen (eds), op.cit.

⁷¹ V. Ball, *Journal of the Asiatic Society of Bengal*, 1867, Vol xvi, p.47.

⁷² Ranchi District Gazetteer.

⁷³ Ibid.

⁷⁴ H.H. Haines, *The forest flora of Chotanagpur* p. 3.

⁷⁵ Selection of papers regarding the famine of 1896-97 in Bengal (hereafter *Famine Report*).

⁷⁶ *Famine Report*, vol 2, p. 193.

⁷⁷ Ibid.

⁷⁸ *Famine Report*, vol 111.

⁷⁹ *Famine Report*, vol 1 p. 337.

⁸⁰ Letter from E. M. Konstam to the Conservator of Forests in Bengal 7 December 1896 in *Famine Report*, vol 2, p. 191.

⁸¹ Ira Klein, 'When the rains failed: famine, relief and mortality in British India', *Indian economic and social history review*, 21, 2 (1984).

⁸² *Ibid.*, p. 201.

⁸³ Simon Commander, 'Malthus and the theory of unequal powers: population and food production in India, 1800-1947', *Modern Asian Studies* 20 (4) 1986; See also, S. Ambirajan, 'Malthusian population theory and Indian famine policy in the nineteenth century', *Population Studies*, 30, (1976), 5-14 p. 63.

⁸⁴ *Famine Report*, Vol 5, p. 278.

⁸⁵ *Ibid.*, p. 300.

⁸⁶ *Ibid.*, p. 310.

⁸⁷ *Ibid.*, p. 325.

⁸⁸ *Famine Report*, vol viii, p. 380.

⁸⁹ *Ibid.*, p. 4.

⁹⁰ Quoted in a letter from A. Forbes to the secretary, government of Bengal, 27th January 1897.

⁹¹ Tour diary January 1897, *Famine Report*, vol iv.

⁹² *Famine Report*, vol v.

⁹³ *Famine Report*, vol vii, p.401.

⁹⁴ See David Arnold, 'Famine in peasant consciousness and peasant action', op. cit.

⁹⁵ *Famine Report*, vol vii, p. 427.

⁹⁶ *Famine Report*, vol 111.

⁹⁷ Tour diary of Rakhal Das Sirkar, Bihar State Archives, Patna, entry dt 1st Feb 1897.

⁹⁸ *Famine Report*, vol vii, p. 379.

⁹⁹ *Famine Report*, vol vii, p. 379.

¹⁰⁰ *Famine Report*, Vol iv, p. 5.

¹⁰¹ *Famine Report*, vol 5, p. 296.

¹⁰² *Ibid.*, vol vii, p. 394.

¹⁰³ *Famine report*, Vol viii, p. 412.

¹⁰⁴ *Famine Report*, vol x, p. 397.

¹⁰⁵ *Famine report*, vol ix, p. 395.

¹⁰⁶ *Ibid.*, p. 420.

¹⁰⁷ *Ibid.*, p. 429.

¹⁰⁸ *Famine Report*, vol 5, p. 16.

¹⁰⁹ *Famine Report*, vol xii, p. 386. In his recent book De Waal has argued that the excess deaths in Darfur, Sudan in 1984 famine were not a result of starvation but of disease and in his list of the different ways of saving lives the nutritional issue is listed as the final one, priority being given to improving health care. He thus fails to link famine and disease. This argument clearly gives the lie to the commonsense notion that under-nourishment, especially during an intense subsistence crisis, weakens the body leaving it prey to various fevers and diseases and I have found little evidence to support this theory in Chotanagpur. See A. De Waal, *Famine that kills*, p. 193.

¹¹⁰ *Famine Report*, vol 12.

¹¹¹ *Famine Report*, xii, p. 401.

¹¹² *Ibid.*