

Jungles, Reserves, Wildlife

A History of Forests in Assam

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and non-official exhibitions. It was now easier to handle the disease of a particular plant and the department could save much of its resources in the experimental plantations. Two different approaches were adopted to handle such kinds of disease. While in the nurseries, spraying with known fungicide was undertaken, in the plantations the diseased plants were weeded out selectively. An experimental Resin and Turpentine Factory came up on a commercial scale in 1953 but had to be shut down in 1955, as the cost of collection of resin was too high to be economically sound.¹²² During its short stay the factory produced both commercial and medicinal turpentine oil, and various types of resin. During this period the collaboration of the department with various scientific institute became quite regular. The most important direction came from the Forest Research Institute who provided various technical help not only for departmental activities but also to private entrepreneurs. For instance, scientists from the Forest Research Institute visited Surma Valley Sawmill to advice them in the installation of seasoning kiln.¹²³

In the long run, it was the heavy dose of science and other ingredients that transformed the character of the local forest landscape forever. The Forest became more a commercial commodity than a matter of rich biodiversity and was to be protected from various unwanted factors. This helped in the better regeneration of a few specific timbers. The integration of science and commerce thus became a significant aspect of the history of forests in Assam. The sound friendship between the forest and technology contributed tremendously to various aspects of the forests of Assam. While its uses in the late nineteenth century were minimal, in the twentieth century the entire forests came to depend on its virtues. This friendship not only transformed the commercial character of the forests but also reinvented the forest behaviour along with its ecological system.

Chapter-7

A History of Wildlife

Compared with those of most other jungly countries, there is scarcely any peculiarity in the animals of Assam.¹

Abounding as Assam does in extensive tracts of wild and uncultivated wastes, it is, as may be conjectured, the rendezvous of a countless multitude of animated beings, which live and move upon its surface.²

Since the early 19th century there was significant change in history of wildlife in Assam in matters of understanding and its relation to the native society.³ While the history of wildlife bewildered colonial rulers in the 19th century, soon they had discovered in them a pleasurable pastime. The natives practiced hunting and at the same time revered the forests. Innumerable folktales tell us how the villagers often stayed away from the dense forest for fear of the wild animals. However, as the colonial government expanded its agrarian frontiers it was obvious that vermin eradication became the official policy in regard to wildlife history. Even when forest conservation came to play an important role in the agenda of colonial history, conservation of wildlife still occupied the back seat. The colonial interest in the protection of the wildlife is a much later phenomenon, coming only in the last decades of de-colonization in particular. This was signified by the occasional legislative pieces and increasing interest shown in the protection of the wild by the colonial administrators. The significant point is that in wildlife conservation it was not only the foresters, but also the large assemblage of colonial as well non-colonial personnel that took active

interest in safeguarding the wildlife. In Assam, the earliest attempt came in the form of the establishment of a game reserve as early as in 1905. Since then it has been a long journey and there sprung up a considerable number of wildlife parks, sanctuaries etc. in the post-independence period. The state took the initiative, though albeit fragmented, in the generation of awareness in wildlife protection. In the 70s and the 80s there was a growing participation of the local wildlife lovers. In the 90s and then onward, the wildlife question got more prominence in the vernacular press. The third generation of wildlife lovers come from a different background. Many of them have professional expertise in matters of wildlife preservation. The fact that prominently came into focus during this time is that there is selective notion of preservation of specific species only.

Understanding the Wild: 19th century

In the nineteenth century as the officials of the East India Company ventured into the dense jungles of Assam, they encountered wild animals. Many of them have left their account of the wild fauna. Within a few years as the company consolidated its political position they took time off to enjoy moments of leisure through shooting and hunting. The history of the wild life in the nineteenth century Assam is a period of understanding and that of hunting for pleasure.

In one of the earliest account, M'Cosh gave amazing depictions of most of the animals found in the jungles of Assam. 'Wild elephants are plentiful, and move in large herds, and are very destructive both to the crops and to human life; entering villages in day light, and plundering granaries, and stores of salt, of which they are very fond.'⁴ He mentioned that they were caught in large numbers in every season and they were transported to various countries. About 700 to 1000 elephants were exported from Assam every year. A duty of 10 rupees was levied at

Goalpara on every elephant exported. In a typical example colonial response, M'Cosh was astonished to find that the 'Singphos killed elephants by using poisoned arrows fired from a musket, and after striking out their teeth, left the carcasses to be devoured by beasts of prey'.⁵

The rhino occupies an important position in the wildlife history of Assam. Colonial sportsmen took keen interest in the rhinoceros. Pollock, writing in the late 19th century, saw only two varieties of the rhino in Assam.⁶ A specimen of the two-horned rhinoceros *Sumatrensis*, whose range was extensive, though it was rare and extremely localized, was recorded from the Brahmaputra valley in 1875.⁷ The same specimen was found in the early 20th century at different places. Rhinoceros occupied an important place in M'Cosh's account. He mentioned that they inhabited the densest part of the forest. 'The young ones were a good deal looked after for transmission to Europe; but they are so difficult to be found, that a party with two or three elephants don't succeed in catching above one or two in session, and these when caught frequently die in the nursing.' He clearly mentioned the limited nature of the conflict between human habitat and animals like tigers, leopards and bears which were 'numerous but though the tigers occasionally carry off a bullock, accidents to human life are but rare'. In the early 19th century there was a reward of five rupees a head allowed by the government for extermination of every tiger. M'Cosh referred this as caste practice and also a profession. He further noted that the wild buffaloes that were found in different parts of Assam were much larger than those of the neighbouring Bengal. In his description there was further mention of cows, horses, sheep, hogs, poultry, porcupines, snakes, leeches, white ants, crocodiles, tortoise, porpoises and fish. Wild game was found in abundance. 'Deer, hares, jungle fowl, pheasants, peacocks, partridges, floricane, snipe and weather fowl of all descriptions are procurable but no game keepers interest themselves in catching them'.⁸

For Robinson, the wildlife falls under the typology of zoology and he includes the quadrupeds, birds, reptiles, fishes and insects. Robinson had mostly relied on the extensive survey done by Dr.

McClelland.⁹ His account tapped the vast resources seen from the academic terrain of the zoologist. This description was also an attempt to place the wild resources of Assam in the larger framework of European science. He was opening up a vast field for further observation. 'The native zoology must therefore present a vast field for observation, and so remarkable...it for the variety, splendour, and singularity of its forms, that is difficult to say in which department it is most interesting'.¹⁰ Robinson was all in praise for the geology and climate of the region. 'Flourishing beneath a genial climate, and nourished by dense vapours and frequent showers, in a soil naturally humid, vegetation here attains a luxuriance inconceivably magnificent'. The wildlife had taken the blessings of this geology resulting in brilliant colours and singular shapes.

Jenkins further informs us that merchants from Bengal made an annual visit to all parts of the province with Koonkees or decoy elephants to catch them and were generally very successful. The year before last 500 were exported, probably 6 or 7 hundred caught, and last year about 900 were caught. Newly caught elephants could often be purchased, if under 5 cubic, for Rs.100 but the merchants seldom disposed of the finer ones in the province as they realized Rs.800 to Rs.1,000 each for them in Bengal and Hindustan, if they succeeded in keeping them alive for two to three years. During Mill's visit it was observed that both ivory and rhinoceros horn were present in the list of export items. However serial statistical data is unavailable for the entire period, which went un-scanned. Later accounts also corroborate the large-scale spatial distribution of the wild animals across the province.¹¹

The Agrarian Frontier; Colonial State: Battling the Wild

The peasant's understanding of the wildlife in Assam as that of the other provinces was directly related to agrarian expansion. Peasants in

different parts of the province needed to check the aggressive attitude of the wild animals in their paddy fields. There are innumerable tales and local legends of the defensive measures taken by the native peasants to protect the paddy from the wild animals. In fact, in the pre-colonial period there were frequent encounters between the peasants and the wild animals even as the agrarian frontier expanded. The peasants did not have any modern weapon to tackle the 'menace' of wild animals. They resorted to fire, collective chase or night watch at the field. There was no state support for the peasants in this regard. As early as 1835 Captain Jenkins had taken note of the status of wild life in the following words:

Of wild animals we have herds of every species, elephants, rhinoceros, buffaloes, tigers, leopards, jackals, and numerous kinds of monkeys. They all commit serious depredations on the crops, and more particularly the elephants, which often demolish granaries in the open day to get at the grain and salt.¹²

The expansion of the agrarian frontier continued to face grave threat from the wild. Throughout the colonial period we come across such reports. A conservative estimate made during the early decades of the colonial rule paints a grim picture of the number of the people killed by the wild animals in the Darrang district.¹³ According to this estimate wild elephants killed 17 people in the year 1833 while in the next year another 17 lost their lives. In 1833 wild buffaloes killed another 2 people. Tigers had killed 12 people between 1833 and 1834; the number was 3 for people killed by wild pigs. One person was killed by alligators during 1834. Writing in 1879 Hunter also took notice of the large-scale damage done by the wild animals to the crop and humans. He estimated that during 1869, approximately '254 people met their death from wild beasts, and 102 from snake bites, or an average from both causes of about seventy a year'¹⁴ while in Kamrup '129 persons were reported to have lost their lives from wild beasts or in consequence of snake bites'

in 1868.¹⁵ Hunter wrote that the peasants in other districts also shared a similar experience. He informs that the devastation was so detrimental to the peasant society that in Kamrup during 1866-67 the population of an entire village fled.¹⁶ The following table gives a picture of how elephants often frequented the villages during the harvesting season and caused problems for the villagers for their crop in the district of Darrang.¹⁷

Table-10

Group	Number of Attack by Wild Animals				Total
	Sept-Oct	Oct-Nov	Nov-Dec	Dec-Jan	
Patharughat	42	99	92	45	278
Kalaigaon	534	536	563	576	2209
Khallingduar	264	225	187	72	748
Kariaparaduar	41	108	134	101	348
Haulimuhanpur	350	333	242	80	1005
Chapori	37	43	30	99	209
Panchnoi	42	99	92	45	278

Early in the 20th century the revenue and agricultural department continued to show their dismay at the damage wrought by the wild animals. Describing the condition of the erstwhile Sibsagar district it was mentioned that 'a great impediment to the extension of cultivation is that the tree jungle which surrounds newly-cleared fields harbours wild pigs, monkeys, elephants and even in west Golaghat rhinoceros which prey to crops and cause considerable damage'.¹⁸ The report further suggests that the killing of cattle by tigers was very common. In the district of Lakhimpur, another report tells us how the presence of elephants found in large numbers, was 'particularly disastrous for not only do they eat the standing crops, they also trample down a considerable amount'.¹⁹

To keep up the agrarian expansion against the wild beasts, the easiest way was to kill the latter. The administration declared a prize for killing wild animals. In 1870 the prize offered for the killing of a tiger was Rs.5 and Rs.2.8 for a leopard. Within the next couple of years there was a considerable increase in the prize money that increased to Rs.25 for a tiger and Rs.5 for a leopard.²⁰ Such an exorbitant increase was necessitated by the express need of the agrarian expansion. A considerable sum of money was spent in the three districts of Kamrup, Darrang and Nowgong to kill the animals.²¹

The imperial design for the extermination of wild animals took shape along with the agrarian expansion along with the management of the vast forest areas. Extermination of the wildlife was necessitated – both constructed and imagined – by the necessity to expand the agrarian frontier and for hunting practices. The selection of the animals in the list of extermination was determined by the native and colonial cultural practices. The control of errant animals and of disobedient subjects was integral to the establishment of the British power in the countryside. Indian as well as European hunters were encouraged to kill carnivores. The collection of trophies had already begun in right earnest, anticipating the obsession of the late nineteenth century. While imperial intrusion in this phase of hunting in India may have been limited, it was a foretaste of the future.

Richard Temple had redefined the system of disbursing rewards for killing carnivores which was much more systematic. In the meantime one army officer Captain Rogers proposed an eccentric scheme to exterminate tigers. His plan led to an intense debate and finally had to be abandoned. Most provincial officials agreed on the need to eliminate the species, but differed on the means to achieve this aim. Rogers had suggested that spring guns be placed along paths inside the forest frequented by the tigers²². He further admitted that this strategy was unsporting and bound to be viewed with the most 'supreme court'. Shikaris in each district in British India were to be organized into regular bands to implement the scheme.²³ Led by the British army officers, they would reduce the number of wild animals. The general impression was that

tigers were the animal counterparts of 'thugs and dacoits' to be destroyed in any manner that was effective.

The extermination of the wild continued into the 20th century. It is being argued that large-scale opening up of the agricultural land in 1930s and 40s had depleted the levels of wildlife to its worst-ever level. As the next century progressed there was sharp break from the conventional wisdom about the wild and its impact on the agrarian history. Thus in the beginning of the career of the wildlife sanctuaries, the department was led to believe that, 'an increasing population and expanding land settlement must inevitably lead to the extinction of the wild life: such is the price which civilized progress demands'.²⁴ A forest officer from Goalpara found in the expanding agrarian frontier, the sole reason for the continued poaching and trespassing into reserved areas.²⁵

Varieties of Culture: Game, Sports and Hunting

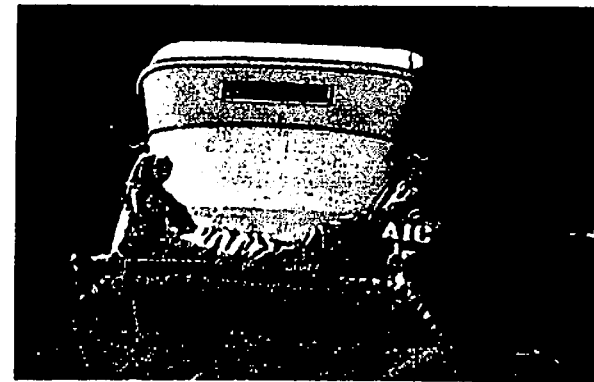
Pioneer wildlife historian Mahesh Rangarajan has aptly argued that sport in the British India has to be placed in the context of the evolution of privileged access to game within Britain.²⁶ Sport symbolized specific kinds of hunting which was characterized by the purpose, techniques and the identity of the hunter. 'Hunting for sport was not only a form of amusement for the British, but also affirmed their status as a racially distinct and close knit elite.'²⁷ In fact, skill over game and hunting was regarded as an added qualification for the Indian civil services officials. They constantly endeavoured to build up their skills in game hunting. Hunting, also part of a 'militarised life style', not only reinforced the sense superiority over Indians but also imbued it with a distinct set of class values. Many believed that sport maintained the physical fitness of the hunter and helped in developing qualities of leadership.²⁸ It was also a 'masculine' game.

In Assam, amongst the European civil servants pig sticking

was quite popular as one instance of a 'masculine' game. It was suggested that participation in such activities would uphold the moral temperament of the servants away from their families and homes. It would also help to preserve their health. In Assam, game was a not very favourite activity mainly because of soil condition of the region. Bart describes the sport conditions in this way:

In Assam and Burma, as in many other parts pig is plentiful, but the ground impassable. On the Brahmaputra the pig are abundant, in fairly open country but as it consists for the most part of paddy fields, the ground is only passable in dry weather, and is then so hard, slippery, and fissured, that it is unrideable even to men like Colonel Pollok, accustomed to cotton soil'.²⁹

The sticky soil worked as deterrent of the fast action needed for the pig sticking. In spite of this, the riverine belt of the river Brahmaputra became a hunting ground for the British officials as well as other European tea-planters.³⁰ Major John Butler of the 55th Regiment



This tiger was shot dead because it killed six villagers in the Cachar division, Photograph courtesy, Annual Report 1939-40

of the Bengal Native Infantry found the sport in Assam an exciting pastime for an English sportsman. He wrote, 'from the vast extent of waste or jungle land everywhere met with it in Assam, there are,

perhaps, few countries that can be compared with it for affording diversion, of all kinds, for the English sportsman'.³¹ Butler provided information on the available 'game' viz. tiger, elephant, rhino and deer. According to his count in one day's sport it was no uncommon event for three or four sportsmen to 'shoot thirty buffaloes, twenty deer and dozen hogs, besides one or two tigers'. Buffalo was seen as a big challenge to agriculture. Butler said that in lower and central Assam large herds of hundreds of buffaloes were frequently met with and the devastations of the paddy field were incalculable. T.T. Cooper, a big game hunter in Assam, said of the wild buffalo, 'it was so numerous and so destructive as to be an absolute pest'.³² And Captain Pollock, the military engineer while laying down the road networks in the Brahmaputra valley in the 19th century shot dead one rhino or buffalo for every breakfast.³³

The Indian hinterland was much richer than England in terms of the availability of game animals and Europeans were keen on experiencing the thrills of chase and hunt. Encounters with big animals like the 'savage tiger' and the 'noble lion' were far more attractive and exciting than the routine business of spending small shots on birds. For James Forsyth, who was posted in India in 1857, 'the main attraction of India lay in the splendid field it offered for the highest and noblest order of sport, in the pursuit of the wild and savage denizens of its forests and jungles, its mountains and groves'.³⁴ The range of the firearms of the colonial officers however may well have limited the impact of early British hunters on local fauna. Antelope shooting for instance could be only successful if the hunters got within the 80-100 yards of the animals.³⁵

Hunting was not a merely a European activity.³⁶ The native Assamese also participated in the hunting and it was not merely confined to the higher echelons of the society. It is difficult to qualify the levels of destruction wrought through game hunting by the British and the natives. Tarunram Phukan was known for his skill in shooting and his father was also a well known hunter. There was a good social network amongst the best hunting families within Assam and out side it. The Maharaja of Cochin was also a close family friend of the

Phukans by virtue of their hunting practices. Tarun Phukan's elder brother Nabinram Phukan also served as a trainer for the local colonial officers in their hunting lessons. The former also helped in training batches of local people, mostly belonging to the tribes, ostensibly as a helping hand for his game and hunting. He penned down his memoirs of hunting in different places of Assam in *Shikar Kahini*.³⁷ It was desirable at that time to obtain the reputation of a good Shikari. There were popular regulations of hunting practices. There was no distinct species of fauna that escaped the hunter's attention. Some were killed for mere joy while many were brought down for meat. Hunting was more popular in the lower Assam regions. In these localities hunting was a means to show and uphold one's social status. Higher social status required a more ferocious animal to be hunted. Prasannalal Chaudhury, a well-known literary figure, recalls in his autobiographical journey into his hunting life that he learned hunting from his own family tradition.³⁸ His father, a tahsildar also boasted of a glorious career in hunting.

In all probability there was a cultural condition for hunting. Different social strata practiced varied kinds of hunting. Various tribes made regular forays into the jungle to kill animals for various purposes. The means and ends of these practices differed according to the needs of the social strata of people involved. As early as 1837 M'Cosh mentioned that in the northern frontier the Singphos killed elephants by using poisoned arrows fired from a musket. After striking out the teeth, they would leave the carcass alone there to be 'devoured by beasts of prey'.³⁹ The following is typical of such description of game:

The Kacharies of Assam stretch a long, wide-meshed net across the countryside and then drive game into it; everything living that runs into the net is killed with spears and staves. Other tribes like the Mikirs of Assam poison water with the bark of certain climbers and kill all the fish in the locality. In the North Cachar Hills of Assam there is a practice of destroying birds, which are attracted to fires lit at night at certain times

of the year for the purpose. The Nagas of Assam have virtually exterminated wildlife, even birds, in their hills particularly since the war when large quantities of weapons came into their possession.⁴⁰

In lower Assam, buffalo was also hunted for the purpose of domestication. It was believed that the wild animals, which were domesticated, gave more milk and they were better suited to the ecological context of the rural side of Assam compared to the ones bought from the markets in Bengal. The hunters took extreme care not to hurt the animal or any member of the group. In fact, this involved many rituals and other cultural practices. The question of enjoyment or sports came to be associated naturally herewith. Hunters took recourse to tiger hunting as a measure to protect the agricultural production and also as a masculine game. It is mostly seen that such hunting was practiced during the flood time.

Hunting was also practiced by the zamindars of Goalpara and Coochbihar. It was associated with many a colonial and European cultural symbolic traces. The Coochbihar zamindars often came to the Assam territories and for hunting for a few days. Between 1871 and 1907 Maharaj Nripendra Narayan of Coochbihar shot dead no less than 370 tigers, 208 rhinoceroses, 430 buffaloes, and 324 barasingha deer.⁴¹ There are evidences that they regularly visited the various north Kamrup forests for hunting. Often the colonial bureaucrats and other officials had to be escorted by them into these hunting camps. Such hunting was of large scale in which the involvement of a large number of people and fanfare was common. Elephants and big tigers were the common victims of such fanfare. The stories of hunting in the families of the Gauripur zamindar still play an important role in the social and literary imagination of Assam.⁴²

Already there was enough hunting and sport mainly by the colonial officials as well as the European planters. Kaziranga, which was declared a game reserve in the early 20th century, was a planter's heaven for the sport in rhino. E.P. Gee describing the condition of

sport in Kaziranga in the late 19th century wrote how

In 1886 a certain sportsman went out on elephant in the area, which is now Kaziranga to shoot rhino. He encountered one and fired about a dozen shots at it from very close range. The wounded rhino made off, and as it was too late in the evening the hunter returned to his camp. Next day he followed up the bloody trail of the badly wounded rhino and came across it while it was actually engaged in fighting and keeping off two tigers. One tiger the account says had his neck fearfully covered with blood. The sportsman fired at both the other tigers, which escaped, and then finished off the unfortunate rhino.⁴³

While there was limited control over the European sport, the native hunting practices were identified as those based on cruelty. The Bengal Forest Act of 1878 vested the forest department with the power to regulate access to the government woodlands. The definition of forest produce was widened to include hides, horns, tusks and skins. All such products belonged to the government if they originated in the reserved forests. The Assam Forest Regulation of 1891 retained the basic thrust of the 1878 Act in matters of wild animals. The Act of 1879 soon restricted the access to elephants.⁴⁴ Throughout the British Empire few other Acts were passed ostensibly to protect the game.⁴⁵ The Wild Bird and Game Protection Act of 1887 and Act relating to the fisheries of British India of 1897 were important pieces of legislations but most of these Acts remained a dead letter in Assam till the early 20th century. The most important intervention came in 1912 when the forest department promulgated Wild Birds and Animals Protection Act to regulate access to the wild life.⁴⁶ The Act restricted hunting in the reserved forests during the rainy seasons. Shooting of the rhinoceroses was also prohibited. The growing concern about the depletion of game had probably forced the foresters to strictly implement the Act. Licenses were issued to shoot wild animals with the primary purpose of

protecting the crops. The number of such licenses was 4500 guns during 1917-18. Within a couple of years of its implementation, the department admitted that the Act suffered from many lacunae.⁴⁷ There was insufficient staff in the forest department to ensure the proper enforcement of the Act. During floods, there was indiscriminate slaughter of animals, in particular the deer, with the aid of nets, guns and spears⁴⁸ in the areas of Nowgong, Darrang and Sibsagar. The forest department pointed out the apathy of the police and revenue officials as one reason which contributed to the indiscriminate killing of the animals. During 1917-18 six cases of killing deer during the close season was taken into the court in Darrang out of which only one resulted in conviction and a fine of Rs.15.

As there was increasing pressure by the colonial government to control access to wild life, the colonial sportsmen looked for more privileges in matters of sport and hunting in specified tracts that resulted in the formation of game associations. Since the early 20th century we come across information, which suggests the formation of game association in Assam. A Game Association was formed in the district of Darrang to coordinate with the forest department in matters of wild life protection.⁴⁹ There is no conclusive evidence to suggest the social milieu of the members of the game association or the history of its formation. In all likelihood, the planters were the members of this association. During 1916-17 the association had six members.⁵⁰ The basic purpose of these game associations, like their counter parts in the British Empire, was to regulate game as well as evolving rules for the future preservation of the game. The Darrang Game Association suggested that there should be rules and regulation for the control of game and shooting in Assam in line with the Nilgiri Game Association.⁵¹ After lot of negotiations the association was granted the privileges of hunting, shooting and fishing for ten years from 1 July 1915 in a few reserves in the district of Darrang. The association also undertook to employ watchers to protect the game and accordingly four watchers were employed. However, the euphoria of the game association was soon to disappear.

Protecting the Wild: Game Reserve to National Park

The game reserves and sanctuaries were the products of the early 20th century colonial understanding of Indian fauna and the international fauna preservation movement. A small section of the planters' community took the leading role in the preservation and observation of the rich fauna of Assam at the right time. By the early 20th century the threat of rhino poaching had assumed frightening proportions. There was rampant killing of the rhino which attracted the attention of the public as well. In 1903 Times of Assam published a letter, which decried the extensive killing of the animals. The writer lamented the rampant way in which the local Mikirs had taken into the profession of killing of the animals. By this time even hunters from Bengal arrived in large numbers to have an experience of killing the animals resulting in reckless and indiscriminate destruction of the all game in the province. It was found that by this time the rhino had completely disappeared from North-Lakhimpur. J.C. Arbuthnott as the officiating commissioner of Assam valley had written to the chief commissioner about the rhino by saying that 'the animal which was formerly common in Assam has been exterminated except in remote localities at the foot of the Bhutan hills in Kamrup and Goalpara and in a very narrow tract of country between the Brahmaputra and Mikir hills in Nowgong and Golaghat where a few individuals still exist'.⁵² He emphatically pointed out that in the last couple of years the annihilation of the animal had been accelerated. He also argued that the Bengal hunters included novices who fired at anything moved in front of them. In the case of the rhino, the slaughter of females and immature animals had brought the species on the verge of extinction.⁵³ He suggested that there should be some form of restriction in the killing of the animal. This had forced the government to seriously take up the measure of game protection. The chief commissioner admitted that though it was desirable to ban the killing of the rhino, the sanction of the legislative council was necessary, which would undoubtedly come. This had forced the

government to consider the formation of an asylum, which would help the rhino to take shelter during times of crisis. A strict wild life protection act was yet to come.

This consideration of creating an asylum for the rhino led to the proposal of game reserves at Kaziranga, Laokhowa and North-Kamrup in 1905. Soon, there were elaborate discussions on the various aspects of the management of the game reserves, which would require more manpower as well as finance. E.S. Carr, the conservator also expressed a similar opinion about the necessity of preservation of game. The conservator had drawn up more detailed rules in accordance with the already existing regulations that were in force in the Central Province, to regulate shooting and hunting in the proposed game reserves and other reserves too. These rules came into force from 16 March 1905. Hunting, shooting, trapping and fishing within a game reserved forest was absolutely prohibited. In other reserves too rules came into force which regulated hunting and shooting. There were two types of prohibition. Accordingly, the hunting of female rhinoceros and buffalo accompanied by young calves, female bison and green pigeon was completely prohibited. On the other hand various animals came under seasonal protection. Hunters were required to obtain permits after paying a rate, to hunt.

By this time it was an admitted fact in the official circles that the forest department had very little means to protect the wild fauna of Assam.⁵⁴ Whatever sporting rules did exist in the Assam forest manual was 'dead letter'. There was already a public concern about the protection of rhinos in Kaziranga.⁵⁵ The chief commissioner made it clear that the creation of game reserves should not injure existing cultivation, it should not spend much public money on such undertakings and that the department would not afforest land which was suitable for cultivation.⁵⁶ The deputy commissioner of Sibsagar was hopeful that there would not be too much expenditure in the creation of game reserves except the maintenance of forest guards or keepers who would be appointed for the protection of the area. The formal pronouncement of Kaziranga as a game reserve came in 1908.

Once it was declared a reserve, shooting was prohibited inside these forests. Later, in 1916, it was converted into a game sanctuary.

In the early 1930s Kaziranga was a closed book largely unheard of by the visitors, and completely left to itself by the forest department. It was all swamp and leeches. Gee mentions that even elephants would not venture here. He also mentions the attitude of the then British conservator of forest who was convinced that 'no one can enter the place'. The sanctuary got a facelift during the energetic leadership of A. Milroy who opened it up for the visitors in 1938. Gee was in one of the first batches to visit Kaziranga once it was opened for visitors. The following is brief encounter of Gee with the flora and fauna of Kaziranga:

I was one of the first to go and see it. Two friends and the Range officer accompanied me, and we had a most exciting time on our two riding elephants. When I first saw rhino they appeared to be most improbable-looking and prehistoric-like with their quaint features and thick armour plating. Our party carried two rifles, one on each elephant for self-defence, but this practice of taking defensive weapons into a sanctuary was soon discontinued, and since then I have never taken rifle or gun with me in self defence at any time anywhere in India.

As it was opened up for visitors, there was public enthusiasm about the wild within the sanctuary. Gradually visitors and tourists from other countries began visiting the sanctuary. During 1938-39, the Kaziranga game sanctuary collected Rs.305 from hired elephants and view permits. The visit of the politicians and other administrative heads of the province had definitely boosted the morale of the people in charge of the sanctuary.⁵⁷ The game sanctuary soon turned out to be an important place for wildlife observation. A forester who was in Kaziranga noted in his diary,

Took two visitors into the sanctuary. Started the trip for the Benga beel. Here a full-grown male rhino was

spotted. He did not run away though we closed up as near as 100 feet. He kept standing in the open for not less than 20 minutes giving the visitors a satisfactory chance for their camera...having finished with the first rhino we turned back to proceed when all of a sudden, we were face to face with the mother. She snorted. Our elephants stood their ground for a couple of minutes or so but Mohan apparently being uneasy with the rhino snorting at him started making bolted [sic]. The chase went on for a good long distance and the rhino finally gave up. Proceeds towards Telijuri beel, Mohpara and Landubi dolonis. Saw 6 other rhino including a calf, 12 swamp deer and innumerable hog-deer.⁵⁸

During the Second World War there was increase in the numbers of visitors. Military personnel across the world visited the sanctuary. However, the visits of the military personnel brought enormous problems to the animals and there were frequent reports of killings.

There was no estimate of the actual number of animals within the Kaziranga sanctuary. The officials tried to form an estimate of the animal strength on the basis of the visitors' accounts. In 1945 between 11 and 19 March a visiting group saw 30 rhinoceros, 80 buffaloes, 1 elephant and numerous deer.⁵⁹ During 1948 a census was taken of the rhinos in Kaziranga where E.P. Gee also participated.⁶⁰ After a few years another attempt was made to estimate the number of rhinos present within the Kaziranga Game Sanctuary. This happened when Lee Marriam Talbot, representing Survival Service of the International Union for the Protection of Nature, visited Kaziranga in 1955.⁶¹ The first extensive census of the sanctuary's wildlife was carried out in 1966. These censuses shifted the focus from essentially the rhino to other animals. The Forest Department conducted three more censuses between 1972 and 1984. The census taken in March 1974 took into account a large number of animals. The well being of the wild animals

in Kaziranga even attracted the attention of the politicians and many a time questions were raised in the assembly about the numbers of wild animals in the Kaziranga Wildlife Sanctuary. Soon the sanctuary was attracting the attention of wildlife conservationists from various international institutions.

Along with Kaziranga game reserve the proposal for North Kamrup and Laokhowa game reserves was also given formal shape. North Kamrup or Manas, as it came to be known, was constituted in 1905. Laokhowa was declared a game reserve in 1907.⁶² These game reserves came to be situated, in most cases, in areas where the commercial viability of timber was less and areas less prone to human habitation. For example, the Laokhowa reserve, consisting of 25760 acres of land was situated in the Juria mauza; which the forest settlement officer said, had two cadastral and two extension survey villages that were almost deserted. In the next few years more game sanctuaries were added and the existing ones were given larger areas. As the protection of wildlife gained prominence more game reserves were declared before even prior to independence. Orang Wildlife Reserve was constituted in 1915. The Sonai Rupa game sanctuary was constituted in 1934 to include 'well stocked game country'. Pobha Reserve was declared a sanctuary during 1941 to protect the wild buffalo and to improve the local stock of the local domesticated animals.⁶³ As the last century was drawing to a close after a hazardous journey, there were in existence a number of wild life sanctuaries and national parks in Assam. In 2000 the total area under the national parks was 1968.6 square kilometres while that of the game sanctuaries was 883.16 square kilometres.⁶⁴

In the early days of the wild life sanctuaries, meagre funds were allotted for them. It was the same story for all the three main sanctuaries. In spite of this, the department concluded that the stock of wild animals had 'definitely increased'. The areas were regularly patrolled against poaching. But quite often this was met with armed resistance and threat to the lives of the forest guards.⁶⁵ The department admitted the increase in the destruction of the game but also expressed its desire to protect the flora and fauna of the region. The vernacular

press exerted enormous pressure regarding the destruction of the game.⁶⁶ The awareness created by the press about the animals came to play a vital role in the policy formulations of the forest department towards wildlife.

Poaching continued to be a major problem for the well being of the wild animals. The most important inducement for poaching was the rhino horn and elephant tusk. Since then we come across interesting narratives of poaching in fauna. A forest officer in mid-1930s removed about forty carcasses of rhino in Manas with the horns taken. The department realized that the presence of reliable sportsmen was extremely necessary for the detection of poachers and prevention of the same.⁶⁷ But this was not easily practicable. Gee mentioned that the neighbouring Mikir families who dwelt on the southern boundary of the Kaziranga sanctuary were among the many poachers. There was to be found extensive poachers' camps alongside every bhil inside the Kaziranga sanctuary in the 1930s. The forest department admitted that poaching was becoming a crucial factor in the various reserves of Assam.⁶⁸ In Goalpara and Kamrup it had registered a very high figure. It was not merely limited to the game sanctuaries. 'Wherever game moves poachers move after'. It was found that the poachers had some permanent structure for poaching at different game sanctuaries. They constructed machans near suitable places from where it was easier to keep an eye on the elephants and other animals to prevent poaching. Poachers often followed the footmarks of the rhinos. Describing the condition of poaching in the Manas game sanctuary, it was noted that during mid-winter the grazing areas of animals got restricted and the poachers chose this period as their most convenient one for poaching. The animals were found during this time in close vicinity. During inspection it was found that there was widespread use of unlicensed guns. The poachers belonged to different localities and their areas of operation were not limited to a single one. It was difficult for the guards employed there to track and recognize them. The report also asserted that the local village headmen worked in tandem with the poachers. These made it possible for the poachers to move freely in the jungle,

get their ammunition, and find shelter. Poaching had brought ready money and it had allowed the poor to become rich overnight. Poaching of rhinoceros remains a serious problem.

The strict supervision in the sanctuaries decreased the intensity of poaching but soon forgery in the trade of rhino horn also acquired a complex character. Though during 1930-31 the department noticed a slump in the trade but in reality it was found that the marwari traders were lamenting that 'Cacharies had palmed off on them bamboo roots, blackened and faked to look like rhino horn, and when they had learnt to distinguish a bamboo root from a rhino horn the Cacharies went Cacharies one better'.⁶⁹

To protect the wildlife from various forms of pressure, the wildlife sanctuaries put emphasis on various kinds of shooting rules. During 1937-38, a set of revised rules was framed, but within a year of its application it was found that they were unsuitable for the purpose for which they were framed. The shooters claimed that the fees were too high. This prevented many people from taking out a license. In 1939 the government introduced a set of revised shooting and fishing rules.⁷⁰

In the mid-20th century the game sanctuaries faced other problems too. There was demand for de-forestation of a few game reserves.⁷¹ Rapid expansion of the agrarian acreage put serious pressure on the existence of the wild animals. This was particularly true of the un-classed state forest, which was rapidly thrown open for agricultural purposes. The new agrarian frontier had reduced the area for grazing of the wild animals. Moreover the geographical location of various sanctuaries created further problems for the well being of the wild animals living there. For example Manas and Sonai-Rupai were situated close to the hills and provided good opportunity for the wild animals to move into the hills during the rainy season. It resulted in lateral movements of the wild animals making the monitoring of the game a difficult task. Even as the question of protection came to the forefront, the policy makers could not avoid the matter of hunting too. For many early protectionists, game sanctuaries needed to give equal status to

both controlled hunting and preservation. During the time of the establishment of Manas game sanctuary it was suggested that Manas be a shooting reserve, where sport-hunters be allowed to collect trophies and the fees thus collected be utilised for the protection of the wild animals from poachers.⁷²

In the post-independent period the attitude towards the wildlife sanctuaries changed.⁷³ Concern for wildlife came to occupy an important position in various public debates. Systematic arrangements were introduced to 'watch' the wild animals. It afforded the natives to appreciate their wild life and help in the growing concern for the preservation of the wild life. Immediately after independence, in March 1949 the provincial government had invited one of India's best-known wildlife conservationists, Salim Ali and Dillon Ripley, an American Ornithologist, to enquire into the condition of wildlife of Assam and to make recommendations for the improvement of sanctuaries.⁷⁴ They were accompanied by people like E.P. Gee and C.G. Baron to acquaint them with the condition of wildlife in Assam. Ali and Ripley visited the four main sanctuaries and submitted their report to the government. They made a film on Kaziranga and prepared a report on the condition of the wild life in the Kaziranga. This was a major initiative taken by the government of Assam to publicize the cause of wildlife throughout the country. The most important aspect of the report was the brakes that it had applied on the optimism regarding the 'raised' number of rhino population in Assam. Their estimate was drastically opposite to the prevalent assumptions of the existing number. For example, prior to the visit of Ali and Riply, various official estimates about the rhino population in the Manas game sanctuary were somewhere between 40 and 150 while they discovered it, shockingly, to be about 8 or 9. Both of them found only two tracks during their six days of stay in that game sanctuary.

The objective of establishing the game sanctuaries seemed to be a success in spite of many the hurdles it faced. The wild life protectors believed that the numbers of wild animals had increased in some cases. The following instance from Sonai Rupai sanctuary gives a typical note

of exclamation often made by the foresters about the success of the wild life sanctuaries:⁷⁵

Tigers have increased to such extent that there must have been a good deal of fight amongst themselves for booty. The carcass of a hog deer with the skin over, was seen by the writer, hanging from the branch of a tree about 15 feet from the ground. Apparently when several tigers were fighting for enjoying the kill one must have taken it up and hung it by putting the head of the deer in between the branch and the main tree, so that he alone can enjoy while the rest will be watching him. Innumerable scratching on the bark over the trunk of the tree showed that attempts were made by the rest also to have a part of the booty.

The game sanctuaries were given a new terminology- they were to be renamed as wildlife sanctuaries. Thus, in 1950 the name was altered to Wild Life Sanctuary. The official reason behind the change was that the word 'game' referred to those animals and birds, which were shot for trophies and for meat whereas the term 'wildlife' embraces all living creatures, and implies their conservation. To give protection of wild life more legitimacy a State Wildlife Board was formed in 1953 with people like Satradhikar Goswami of Garmur, P.C. Barua and E.P. Gee as its members.⁷⁶ The members who were selected had their interests in the preservation of wildlife and could made impact on the wider wildlife concern. But the board turned out to be an ineffective one. Since its formation it met only once in 1958.

The rhino continued to face severe crisis despite the establishment of game sanctuaries. The situation had deteriorated in the post-independence period. In 1954, writing to J.L. Nehru, the prime minister who loved wild animals, the chief minister of Assam B.R. Medhi admitted that the rhino was on the verge of becoming extinct in Assam.⁷⁷ In the winter of 1954, the government enacted the Assam Rhinoceros Preservation Act to protect the rhino from being killed,

captured and injured. The Indian Board of Wildlife also put pressure on the government to protect the animal in right earnest. During 1963-65, the Indian Board for Wildlife took up the matter of wildlife seriously. During this time, the board had acquired a new dimension in managing wildlife sanctuaries and national parks. It stressed on the need of more numbers of such sanctuaries and the prohibition of grazing within these areas. The board had taken another important initiative of not allowing 'foreign dignitaries and VIPs' to shoot inside the parks. This was rather the most important and daring directive that the board had taken to spearhead the cause of preservation of national parks and wild life. There was a continuous pressure to allow the department of tourism in managing the inflow of tourist inside these sanctuaries. With the cooperation of professional wildlife conservationists it was now realized that protection of wildlife inside the sanctuaries needed the cooperation of the neighbouring people. The problems arising from close contact between the human habitation and the wildlife could be not evaded any more and hence the programme of the national parks. It was felt within the department that the two wildlife sanctuaries should be converted into national parks. In March 1968 a bill was introduced in the Assam Legislative Assembly with a specific view of preserving the rhino in Kaziranga as well as to attracting a larger international attention to it. The prelude to the bill goes to the census conducted by Juan Spillet in 1967. The bill was sent to a select committee, which was chaired by Mohendra Mohan Chaudhury, and without any major change it was passed in the winter session of the assembly in 1968. The Assam National Park Act of 1968 came into effect since 1969.⁷⁸ In January 1974, in pursuance of the Assam National Park Act of 1968, the Kaziranga Wildlife Sanctuary spreading across an area of 430 square miles was declared a National park.⁷⁹

Elephant: Hunting and Preservation

The elephant occupied an important place in the rhetoric of fauna preservation as well as in generating revenue for the colonial exchequer.⁸⁰ In matters of elephant hunting and preservation the colonial government could rely on the extensive native knowledge and expertise. As the colonial rulers came to retain the custody of the elephant they had to negotiate with the native experts as well as the tradition. Much of the colonial notion of the Indian elephant was formed by the experiences of the North eastern geography. Before the coming of the colonial rulers there was extensive use of elephant in various affairs of the state. The elephant was a major item of pre-colonial war booty. Apart from being a royal gift, it worked as the symbol of royal prestige and magnificence. Within the geographical territory of Assam, the capture and domestication of elephants acquired much sophistication during this period. Accounts of large-scale transportation of elephants to the Mughal emperor in Delhi can be found in various historical works. On the other hand, there was a small handicraft sector specialising in ivory.⁸¹ The pre-colonial knowledge of the elephant came from local practices, understanding and observation. Apparently the pre-colonial knowledge on the elephant had two utilitarian perspectives, one for the protection of the paddy fields and the other for their capture, management and domestication. All this had passed into the oral as well as written tradition much before the arrival of the colonial rulers. The innumerable folklores, primarily vibrant in lower Assam, are proof of the first kind of local knowledge.⁸² The *Hastividyanava*, an ornamented manuscript prepared under the auspices of the pre-colonial Ahom rulers, undoubtedly exemplifies the extensive knowledge of the native regarding elephant keeping.⁸³ The manuscript, now available in print form,⁸⁴ meticulously describes the several methods of elephant keeping, its breeding and domestication. No one in particular was the chief patron of the elephants. It was to be supported by capital and with the social sanctity. Amongst the chief agents of interest in elephant

capturing in Assam were the religious heads, the gossains or high priests. They were also the chief owners of the hunting elephants. Many of them lived on the money thus earned. The social practice of elephant hunting by the religious heads was found widely prevalent even in the post-independence period.

The elephant came to play important role in the penetration of the colonial rule. It was used for the transportation of the colonial administrators into remote areas along with other materials. The elephants could be used in different seasons and also empowered the person who rode on it. Elephants quickly emerged as a symbol of colonial social status. The elephant had other utilitarian roles in the colonial world, too. First, since the beginning, the British officials were optimistic of the revenue potential of the elephant. Way back in 1837, M'cosh estimated that about 700 to 1000 elephants were exported from Assam annually at an average price of 300 rupees. M'cosh further mentioned that these elephants were captured by the private suppliers and bought by the Bengal commissariat department. The elephant contributed to the revenue of the colonial government. The Revenue and Agriculture department dealt with most matters related to the elephant. Earnings from elephant were categorized as minor forest produce. During 1875-80 the total revenue derived from sale of mahals throughout Assam was estimated at Rs.123766.⁸⁵ Secondly, the elephant contributed to the strategic needs of the colonial empire. This was the most important reason that led the government to undertake protective measures for the elephants. Apart from this strategic need, the regulated hunting was seen as an imperative in order to defend that local inhabitants from the havoc caused to their lives and property. Simultaneously there grew the awareness that it was necessary to protect wild life from threats such as indiscriminate shooting. What came to be adopted was the policy of protection with a utilitarian thrust advocated by G.P. Sanderson, who came to dominate the elephant catching and management in the colonial world. He ardently espoused that 'protection and utilization should go hand in hand'.⁸⁶ Ideas about the exigency of state intervention in elephant hunting thus arose along

side the perceived necessity to extend protection to the life and property of the local inhabitants.

Elephants were found in various localities of India. A sound craft of elephant-catching operation was practically available only in parts of Chittagong, sub-Himalayan forests that included Assam and the territory of Bhutan.⁸⁷ Sanderson mentioned that amongst the chief localities of elephant procurement in India, Assam was the major source of supply along with hill Tipperah.⁸⁸ During the colonial period the import of elephants from Burma and Ceylon contributed to the deficient domestic catching.⁸⁹ Since the mid-19th century, Assam became the most important area contributing to the colonial need for elephants.

By the mid-nineteenth century the colonial state asserted its monopoly right in elephant capturing and trade. The question of government monopoly in elephant catching was first raised in 1851. It was pointed out that law and custom affirmed government monopolies in Arrakan and Cachar, but such claims were not supported in Sylhet and Chittagong. By 1855, the government moved towards new rules declaring elephant catching a state monopoly.⁹⁰ To assert the government's right over the elephant, it prevented the Jaintia raja and others from hunting in Assam. However, such debates over the ownership of the elephant continued for another two decades. The only regulation whereby the provincial government claimed ownership of the elephants was however, created in 1873 when the inner line system included elephants in the list of items requiring permits for trade across the line. By now the colonial state had asserted that the 'elephant is in Assam a royal beast and can only be hunted under government license'.⁹¹ This caused hardships to the peasants whose crops were regularly destroyed by the elephants in permanently settled areas. The landlords who claimed a right to hunt elephants and tax others who did so in their forests were peeved at the loss of privilege and revenue. In Assam the costs of operating the monopoly led to the partial dismantling of system by 1859. There was a lingering debate over the absolute property rights over the big animal. Sanderson, the superintendent of Kheda in Dacca since its establishment and who



Inside the stockade, views of Kheda in the mid 20th century, Photograph courtsey, Annual Report 1939-40



Views of Kheda in the mid 20th century, approach of kunkies within the stockade preparatory to roping, Photograph courtsey, Annual Report 1939-40

later on became a renowned authority on the elephant, had emphasized the absoluteness of the right owned by the state. However, such claims did not go unchallenged. The protracted legal battle fought by the Zamindars of Mechapara and Bijni amply proves the hidden tension over the matter.⁹² After a long drawn out legal battle, the colonial state was empowered with the absolute right over the big animals. In another instance, in 1872, the deputy commissioner of Sibsagar refused to recognize the rights of a plantation owner over a wild elephant. The manager of Attabarrie tea estate had captured a wild elephant within its own grant. But the deputy commissioner had claimed the elephant and sold it on the ground that 'all elephants are the property of Government'.⁹³ On the other hand the Company argued that the estate where the elephant was caught fell under the category of fee-simple grant without any rights reserved and hence the company should be allowed to retain the captured animal. A great deal of confusion followed, ultimately leading to the intervention of the lieutenant

governor, which necessitated the permission of the civil authorities to sanction such a right. The colonial intervention on the elephant was definitely a 19th century phenomenon. At least till 1872-73 there was no distinct set of laws about the ownership of elephant. The Board of Revenue and the commissioner of Assam represented to the government about the necessity of legislative action to realize the infliction of fines for the capture or killing of wild elephants in Assam without lawful authority.⁹⁴ Throughout the British administration there was disapproval of the wholesale killing of the elephants. When forests were declared as reserved forest there were doubts whether it would be possible to hunt elephants in the reserved forests. However, in 1875, the government had permitted hunting of elephants within the reserved forests but invested the deputy commissioners with a discretionary power to decide on the viability of elephant hunting.⁹⁵ In 1879 the Elephant Preservation Act was enacted in India and soon extended to Assam. Henceforth, elephants became a protected species all over British India, though they could still be shot on private lands or if they proved to be dangerous to humans. From the discussions that took place amongst various forest and civil officials it can be safely assumed the Act failed to protect the interest of this princely animal.

In spite of the official legitimacy of capturing the elephant, there was much concern about the killing of the rogue elephants in the colonial administration. In one such example Henry Hopkinson had to explain to the revenue board about the killing of one rogue elephant during 1873.⁹⁶ Hopkinson had defended his junior by arguing that the elephant that was killed had already killed eight human beings. Graham, the person who killed the elephant, argued that he knew the condition of the elephant and it was not a 'must' elephant. The elephant was no more a property of the government, rather a liability. This example however signifies another aspect. It was the growing control of the colonial state over the elephant, which decreased the rampant killing of the animal. This could happen because the elephant was a major revenue earner, which was not the case with other wild animals.

Elephants were bought by the traders outside the province

through a network of merchants who came mostly from Purnea. With much difficulty the Purnea merchants would take these herds of elephants to the Sonepur fair, which normally took up to 40 to 50 days of road march.⁹⁷ Buyers were mostly from the United Provinces and Bihar. Often zamindars from Goalpara and Coochbihar would also keep elephants. A.J. Milroy, who soon became a renowned authority of the elephant in Assam, noted that these elephants were often used for the entertainment of their children who would play with them. Eventfully, many from these families grew up with them.⁹⁸ Soon, such practices were to disappear with the advent of the motorcar. The provincial government also bought elephants. These animals were used mostly as transport for the colonial officials while the tea planters used the elephants to carry tea boxes.

With the progress of the administration in catching and management of the elephant, they were seen to be captured through either the kheda or government leasing out system. The responsibility of supervising the elephant capturing and training was entrusted to the kheda establishment based in Dacca. The department of kheda not only monopolized the capture of elephants but also their training and sale. Under the lease system, the government auctioned hunting rights of the elephant mahals to private lessees. Large areas of jungles inhabited by the elephants were divided into mahals and the right to capture elephants in them was sold by public auction to the highest bidder. In many ways this system was largely an extension of the kheda system. Apart from the auction price, a further sum of Rs.100 was imposed on each elephant captured as royalty.⁹⁹ Through the right of pre-emption, the Assam government had retained the right to buy elephants over 6 to 7.5 feet in height at the fixed rate of Rs.600.¹⁰⁰ There were further rules which forbade capturing of female elephants heavy with calf and the aged elephants had to be released.

The Dacca kheda department was established in the early 19th century.¹⁰¹ In the early days the department was operated by the private contractors under a European officer to capture elephants required for the service of the commissariat department in Bengal. In the mid 19th

century the elephants were brought to Dacca from Burma either in sailing vessels or overland, but the large-scale mortality led to an all-out effort to capture elephants within the subcontinent especially in southern and northeastern parts of the country. Around this time European management was introduced to lessen fatalities. The establishment worked properly from 1866 and since then the area of Garo hills in Assam was identified as the best place for the elephant hunting.

In the second half of the nineteenth century the Government of India administered elephant hunting through the military department and thus elephant capturing in Assam was the privilege of this department. During this period the department obtained a specific number of elephants from Assam. The provincial government required elephants mostly for transport and they met these requirements by taking the elephants after paying the value fixed for them. In the last quarter of the 19th century there was a proposal of the formation of the elephant reserve depot at the river Jhanji in the Sibsagar district. There was also a kheda establishment in upper Assam for a short duration during 1880s based in Lakhimpur. A superintendent was posted here to manage the establishment.¹⁰²

Two methods were employed to capture the elephant. In the first method, the elephant was captured by erecting kheda or stockades round pung frequented by the elephants, into which they were driven. The second one was by running them down and noosing them with tame elephants, which came to be known as melashikar. In the kheda or stockade system, a whole herd was captured at one go. These stockades, which required the labour of some twenty to twenty five men to construct them, were placed in close proximity to any pung or matikhula that showed signs of being visited by wild elephants. After completing their work, that usually occupied some five to six weeks, these men would wait patiently for the advent of a herd to feed at the lick. This wait sometimes exceed three months but eventually one night a herd would turn up, and as it was unsuspectingly feeding at the lick it would be quietly surrounded and the firing of one or two guns

and the blowing of a few hours would be sufficient to make it rush off in the required direction. Before the herds had time to recover it would find itself inside the stockades and lost to the jungles forever.¹⁰³ Kheda required a primary outlay from Rs. 8000 to Rs.10000 and the lessee was required to have in their possession a large number of elephants to tame the wild elephants so that they could be used for the various types of work. Sanderson admitted that such a huge investment was practicable only for government and the native princes and royalty. On the other hand, in the mela shikar, one or two parties consisting of three koonkie elephants, two of which must be selected for speed and endurance called uthanee and one for its strength named khoonti were sent to the resorts of the wild herds. These, on nearing a herd, put on full speed and singled out an elephant, noosed and tied it up in the jungle and then proceeded to catch one or two more. Due to the low amount of capital required for this system it turned out to be most popular in Assam.

Elephant capturing was allowed only during October and March. Although there were stringent regulations for capturing elephants in Assam which was much more rigorous than any other province, Sanderson admitted that the elephant hunting regulations were grossly violated. He mentioned an instance where an individual, not himself a hunter, with money at his command purchased a lease for Rs.2.000 at a public auction. He admitted various petty elephant owners to his block upon payment of Rs.200 for each hunting elephant they employed. The sale of hunting on each tract allowed speculation by a class of middlemen, who enriched themselves at the expense of the government and of the hunters. Often the hunter and mahaldar were two different persons. Buying a mahal required huge capital, which was not always possible for the actual hunters. Sanderson admitted that most of the hunters had poor economic background and were unable to invest big money. In upper Assam various Miri people having a meagre income from agriculture, were good hunters. The lessees coming from across the social milieu in turn leased out their rights to a number of hunters. This helped them to earn a huge profit without

actually participating in the process of elephant hunting. This middle stratum benefited the most, as Sanderson admitted. It is significant to note that these mahaldars often misquoted the number of animals that they had captured and this also generated extra profit. Probably such earnings never subsided even in the mid-twentieth century when a company was formed to earn more from the elephant-catching operation.¹⁰⁴

Extra care was taken to look after the everyday affairs of the elephants in the custody of the district administration. There was a district superintendent to supervise the affairs of the elephants. The district forest offices maintained a register of the elephants captured in various types of shikar. In this register the information on the name of the elephant, its size and health was described in detail along with the details of its owner. The mahout came to play an important role in the affairs of the elephants' health and their working capability. Often the poor health of the elephant, mostly caused by the heavy workload, was ascribed to the negligence of this caretaker. There are evidences of incidents where the mahout's services were dispensed with following the death of elephants.¹⁰⁵ The state incurred considerable expenses in keeping elephants. In an estimate during 1869-70, the total cost of keeping and maintaining five elephants was found to be approximately Rs.2214. This included the amount that was spent in keeping a jammaddar, a mahout, a grass cutter, and the cost of medicine and ration including salt. The mahout and grass cutters were given travelling allowances.

Elephants remained a cause of conflict amongst the various district heads. There was the pressing need of elephants for various works. Their scarcity often led to the acrimonious war of words amongst the administrative heads. This was due to the fact that elephants could not be procured by the district administration itself. They were given their requisite numbers of elephants by the kheda establishment. Every district had different ways of using elephants. While in Goalpara it was possible to have elephants on hire from the houses of zamindars, it was not possible to find the same in Kamrup. For them it was difficult to visualize the necessity and acrimonious fighting was an obvious result.¹⁰⁶

The elephant was a further cause of conflict between the native and colonial authorities. Much before any effective set of rules came in to supervise elephant catching operations, such rancour was very common. For a long time the forest department articulated unsuccessfully the need to keep the right of the elephant capturing in its hand. The only time succeeded in having a voice in matters of elephant hunting was when it disallowed capturing of elephants in the fire protected areas during the winter.

The revenue earned from the elephant mahals was credited to the land revenue department. The reason could be that the commercial activity arising out of the elephant preceded the actual commercial venturing of the forest per se. The following table gives an impression of the revenue earnings from the elephant mahals in the last quarter of the 19th century.¹⁰⁷ Prices of the elephant kept rising since the mid-19th century, which swelled many times in the early 20th century. The establishment of the railway network in Assam had facilitated the better transportation of the elephants to the markets beyond the province.¹⁰⁸ Traders from outside the province found it much easier to take them away without causing any serious harm to the animals. The following table gives an idea of revenue earned from the elephant for select years.

Table-11
Revenue from Elephant

1875-76	1880-81	1884-85	1889-90	1894-95	1899-1900
55137	51883	87160	28899	50452	29305

Elephant hunting acquired a fresh momentum in the second quarter of the 20th century under the stewardship of A.J. Milroy.¹⁰⁹ He suggested modifications in the very form of elephant hunting. At this time it was widely feared that the stock of wild elephants had been seriously depleted. It was also feared that the local hunting practices were more than responsible for the unwanted depletion in the number of elephants.

So it was suggested that rotational practice be adopted in the identification of the localities where elephants were to be captured. Years ago, Sanderson had also voiced concerns over the wasteful methods adopted by the native hunters. It was reported that there was recurrent death of a number of captured elephants every year. However, there was a decline in the market for the elephants. Identifying the reasons for the decline in the elephant business, Milroy suggested that apart from political and economic uncertainty resulting out of the 1930 World Economic Depression, the elephant was no more the convenient mode of transport after the emergence of the motorcar.¹¹⁰ He also suggested that the growing influx of immigrant peasants had decreased the feeding areas of the elephant. The elephant owners found it extremely difficult to maintain them because of the scarcity of feeding areas and this had forced the local aspirants to move out of these businesses.

The two systems of elephant hunting continued till the early 20th century when the department of kheda in Dacca was transferred to Burma. Soon the provincial administration of Assam was allowed to look after the elephant mahals and the leasing out system became the only way of supplying elephants.¹¹¹ But there was apprehension about the viability of the stockade system and the continuous depletion of elephants in Assam.¹¹² Voices were raised about the serious reduction of the elephant population in the jungles of Assam. During 1903-18, an official estimate suggested that the number of elephants caught under the leasing system was 5029. Till the first decade of the 20th century the mahals were leased out for two years only and in the next two years hunting operations was prohibited. This was done with an idea to keep the process of regeneration of herds intact. But as forest officials began complaining about the decline in the number of elephants the system was further modified in 1913. Accordingly the new system only adapted the method of two years of hunting and eight years of rest with a view 'to ensuring the continuance of sufficient stock'.¹¹³ During 1917-18 a census was taken to estimate the numbers of elephants in various divisions. Though the estimate did not find much favour with many forest officials, this conservative estimate put the number of

elephants at around 3610.¹¹⁴ Elephant capturing did not recede and this forced the legislative council to discontinue the system of selling the elephant mahals since 1921. A new system of arrangement of working the elephant mahal came in and reliable persons were entrusted to run the operations of the mahal and to manage them with skill and humanity.¹¹⁵ A few years later the legislative council made an attempt to ban all other types of elephant hunting except mela shikar. Kheda shikar was only allowed in the hill districts and in the frontier tracts where mela shikar was difficult.¹¹⁶

In spite of regulate hunting, elephants continued to provide considerable revenue to the forest department. It was found that between 1925 and 1940 an estimated 4316 elephants were captured realizing revenue of Rs.11, 57,440.¹¹⁷ In 1941 the department imposed limitations on the number of elephants to be captured in the kheda mahals and it further reduced and restricted the capturing of elephants. Both kheda and mela remained in practice concurrently till the post-independence period but the number of elephants captured and mahals has since declined. In 1959 the provincial minister of forest stated that only 240 elephants were captured in Assam during 1958-59.¹¹⁸

In the late 20th century problems surrounding the elephant surmounted. State care for elephants had diminished. It had come to occupy the backseat with lesser numbers of trained keepers and owners. The owners had now limited capital to take care of the domestic needs of the elephants. Occasionally reports appeared in the vernacular newspapers about the malnutrition and death of the wild elephants.¹¹⁹ Quite often whenever the elephants were not engaged in their business their owners found it difficult to maintain them. It forced them to take the elephants on an outing to look for food and the people offered food materials as part of their cultural tribute. To further protect the interest of the elephant, a national scheme - Project Elephant- was launched in 1991-92. Through the scheme, the central government assisted the states that had free ranging populations of wild elephants, in ensuring the long term survival of identified viable populations of elephants in their natural habitats. Various states are provided with

financial as well as technical and scientific assistance for achieving the objectives of the Project.¹²⁰ These funds are granted to the states for habitat management, management of man-elephant conflict, payment of ex-gratia relief for loss of life etc., strengthening of anti-poaching measures, and the capture and translocation of problematic elephant populations. Financial assistance was also provided to capture rouge elephants in order to reduce man-elephant conflicts. However, elephant reserves were not declared until 2003 when five reserves were declared as elephant reserves.

Saving the Big Cat: Project Tiger in Manas

Outside Assam in the 20th century, the tiger was a treasure house for the commercial safari operators.¹²¹ In the year 1968, it was estimated that about fifty commercial hunting parties spent over two million rupees as they set out into India's forests in the hunt for the tiger. Within the princely houses too, the tradition of hunting still had a bright future. Officials and traders were still engaged in the activities of hunting. This brought a variety of public responses, which demanded that some emergency measures should be taken up as early as possible to save the tiger from extinction. The tiger faced other pressures too. The rapid expansion of agrarian frontier, expedited by the use of DDT and other chemical pesticides, decreased the habitable area for the tiger. A condition of ecological collapse forced the tiger, along with other wild animals either to seek offensive defence or go extinct. The tiger was integrally connected with the national emblem.¹²² The result was India hosting the International Union for the Conservation of Nature in New Delhi in 1969. The conference put the Indian Tiger on the 'endangered' list.¹²³ Till now there was no upper limit as to the numbers to be killed by the hunters.¹²⁴ The move was put on better footing with the affirmative support coming from the Indian political class¹²⁵, foresters¹²⁶ and wildlife

enthusiasts. International pressure was also building up. Global voluntary groups like World Wildlife Fund¹²⁷ handed over a million dollars to help save the tigers and thus began a project to save the tigers in India. The central government readily agreed to take over the responsibility of the project, though the participation of the provincial government was very crucial in the success of the programme.¹²⁸

Preliminary works of the Project Tiger was inaugurated with a nation wide census based on identifying and counting tiger pugs in the summer of 1972. This tells of a meagre 1800 animals through out the country.¹²⁹ These attempts laid the foundation for a more concrete proposal to conserve the tiger in its natural state. The idea was to select a set of sites representative of the tiger's various habitats, each with a core area of at least 300 square kilometres, free from any human intervention. And finally the Project Tiger, a forty million-rupee scheme, was launched in April 1973. In the same year Manas Wildlife Sanctuary was selected as the site for the project.

Preparing the working plan for the Manas Tiger project, it was claimed that tiger habitat declined in this region mostly because of the expansion of cultivation and disappearance of deer. The members of Gauripur and the Cooch-Bihar royal family were earlier using these areas as a hunting preserve.¹³⁰ In 1973 the project area covered an area of 2837 square kilometres across the three districts of Goalpara, Kamrup and Darrang. Manas is located at the confluence of Indian, Ethiopian and Indo-Chinese realms resulting in a magnificent biodiversity. It is situated on the northern bank of the river Brahmaputra. There are numerous rivers crisscrossing the Reserve.¹³¹ The reserve runs along the Indo-Bhutan international border, with contiguous wildlife habitats in Bhutan. While the core-zone is a pristine wildlife habitat, the rest of the reserve is a collection of eighteen Reserved Forests intertwined with revenue villages. While traversing the reserve from west to east, one comes across sal forests, both virgin and degraded, moist-deciduous forests, isolated patches of evergreen forests, riverine forests, grasslands of both savannah and terai types, and other miscellaneous forests. Later, the sanctuary was extended by two successive additions, in 1951 and

1955, to 391 sq. km. by including the entire North Kamrup reserve forest and the Manas reserve forest and the area was declared as Manas National Park 1990. The reserve gave added protection to an array of endangered organisms, both plant and animal – as many as twenty such species. An elaborate management plan was worked out for the project tiger.¹³² Accordingly, Manas Tiger sanctuary was divided into four zones.¹³³ One of the zones was the sanctum sanctorum, which would be completely free from any human encroachment. The other three zones would work as buffer zones for the main reserve. The administrative responsibilities were thus redistributed.

The Manas habitat provides an excellent abode to the tiger as well as to its prey species: Hog deer, sambar, swamp deer, Asiatic wild buffalo and gaur. These species migrate freely across the international border. The tiger population was estimated to be 89 during the 1997 tiger census. No comprehensive census exercise has been carried out for quite some time, owing to the lack of well-trained staff as well as the fragile law and order situation but there are indications of a favourable balance between the prey and predator populations. Cases of livestock and poultry lifting, straying of tigers into nearby tea-gardens and human habitations, even mauling of human beings, were not uncommon in the 1970s and early 80s. On the other hand, there is also the record of several aggressive retaliations by the villagers against the tiger. On and off, there have been reports of a tiger entering cattle-sheds and poultry farms. There might have been unreported killings of problematic animals by the villagers. Cases of killing tigers for bones have also come to light in the early 1990s. There have been reports of several cases of killing the tigers seemingly due to ongoing social unrest.

The Conservationist: Snapshots from Jungle

Wildlife had traversed a long road before attracting the late 20th century public awareness. During this interim period, a few individuals became

stalwarts in carving out their space as conservationists. Despite limited social restrictions, a few species fell prey to humans, away from the ecological habitat. Venison was sold in the open and was regarded as delicacy. With some ray of hope for the protection of fauna in the early 20th century Assam was blessed with people like A. J. Milroy and P.D. Strachy who had a celebrated career in the history of wildlife management.¹³⁴ There were also a few foresters whose contribution to the history of wildlife protection in Assam is fondly remembered by many. Milroy made efforts to turn the Elephant Hunting rules to an effective instrument not only to protect them from humans but also to humanize the elephant catching operations. Since then these operations came to be supervised more effectively. The mother elephants along with suckling calves were released without any delay. Milroy also employed a large force of Assam Rifles to ward off poaching in the newly established Manas Game Sanctuary. He took measures to declare the rhino horn as a forest produce, which would prevent it from being traded according to the Assam Forest Regulation of 1891. He thought observation of wildlife was essential for the study of natural history. He argued that this would further help in the prevention of poaching and illegal shooting of any species. To create the scope for such observation, he made a distinction between bad and good hunting; he encouraged game as an end towards 'good' hunting. In fact the career of modern wildlife conservation began with the career of Milroy in Assam. He was regarded as an efficient forester and many of his ideas went into the making of the Indian 20th century wildlife history. P.D. Stracey was both a conservationist and a shikari. A prolific writer on the problems of wildlife, Stracey took great care in extricating the problem of wildlife from the narrow confines of forestry. His writings in the mid of twentieth century had already called for appropriate measures to save the 'vanishing rhinoceros'.¹³⁵

The prestigious career of E.P. Gee should be mentioned as the beginning of a new chapter in the wildlife history of Assam. Gee, educated in Cambridge,¹³⁶ began his career as a manager of a tea-plantation but soon diverted his attention to the rich wild life potential

of Assam. As early as 1933 he wrote about the species of hornbills found in Assam; and the time was also critical. The wild life history of India was passing through the most delicate phase of its career. This period could be termed as transformation from hunters-shooters to wild life observers but the change was painful one. Rangarajan mentioned that Gee was never a big game hunter but ardently participated in another 'gentlemanly' sport of the time, angling.¹³⁷ Not only did he practise it but was also instrumental in advocating the non-harmful effects of angling. He is known for his famous black and white photography and his insightful pieces of journalistic writing. He also became a non-official member of the Indian Board for Wildlife, the apex body that advises the Indian government on wildlife matters, which first met in the year 1952. The circulating myth of the time was that nobody was fit enough to take charge of the wildlife unless one had shot dead a tiger. Gee came up with an idea by the middle of the 1950s with an alternative and asserted that no one should take charge of the forest division until he had caught fish with the rod and line. Gee argued in favour of having separate Wildlife Wardens who would be within the forest department but would have specific powers in relation to the fauna. He also participated in the first ever rhino census that took place in Assam in 1948. This took him far beyond his adopted homeland of Assam. He closely monitored the recovery of the rare swamp deer and the build up rhino numbers in Kaziranga after Independence. In Manas he discovered a new species of the beautiful golden langur. His cooperative style won encomiums from the Indian Prime Minister Nehru on his visit to Kaziranga where Gee accompanied him. In a rare gesture acknowledging Gee's work, Nehru had written his only piece on wildlife as a foreword to Gee's book. Gee's career not only brought new life to the wildlife history of Assam but also radically changed the perception of Indian State towards this aspect. The local foresters worked more closely at par with national bodies and groups in matters of wild life protection. The illustrious career of Gee put wild life protection in Assam on better tracks. Gee also began a career of the 'scientific observation' of the wilds. The science of zoology had

captured the minds of the wildlife conservationist. It was not merely a question of the conservation of the wild but also the science involved. The wilds were observed both objectively and as a subject to be nourished with for its solemn beauty. The Bombay Natural History Society Journal published since 1903 had given further scope for this kind of scientific observations on the wild. Quite often tea-planters left fascinating observations on the wildlife of Assam. Very often thick jungles surrounded the residences of the tea-planters. Wild life came very close to it quite occasionally. Planters left their memories about the various everyday aspects of wildlife. Many wildlife conservationists had relied on these accounts about the nitty-gritty of the wildlife. On his own, Gee had close access to such accounts and his understanding of the wildlife of Assam was fairly based on such accounts. Gee earnestly believed that the most indiscriminate killing of Assam wildlife took place during the time of the Second World War. While this region was converted into a theatre of warfare, with moving military personnel, stationed through the length and breadth of the province; this had forced the wildlife strength of the state to decline sharply. The governmental control over flora and fauna of the state had also temporarily disappeared. Similar was the case with public concern.

This was followed by the illustrious career of Robin Banerjee who was a trained medical practitioner.¹³⁸ With the help of the twentieth century technological innovations Banerjee gave the wild life of Assam a larger canvas. He not only earned a living from wildlife conservation but also promoted the question of wildlife on a larger national and international perspective. He captured the moments of wildlife in both still photography and the motion picture. He was followed by a larger and wider young generation of wildlife protectionists. At the close of the previous century the numerical strength of the third generation of the wildlife lovers went up manifold. From individuals to NGOs, which were ostensibly established to look into the interest of the wild, it is long journey. There is no comprehensive data to understand the activity of these NGOs but the amount of money received by them is undoubtedly huge.

Looking at the Birds

Birds came to play an important role in the history of wildlife. From the mid-19th century till the end of the 20th century the question of birds has been playing an important role in the dialectic of wildlife preservation. By the end of the 20th century the birds were under more scientific observation and there was adequate public awareness about their preservation. There was better cataloguing of the birds focusing on the local and giving it an international vantage point. From observation to protection it has been a long road. Like their counterparts in other parts of the world the literary imagination in the late 19th century began its career through its memory of the birds and their eternal beauty. Folklore was also deeply involved with narratives surrounding the birds. In the late 20th century there were innumerable numbers of groups who spearheaded the cause of protection of the birds. The Journal of Bombay Natural History Society also helped in crystallizing the cause of the birds. This journal has published a large number of research articles and notes on the birds of the region.¹³⁹ The establishment of the department of zoology in various colleges and universities definitely gave a wider scope for the better understanding of birds. Thus birds came to capture the imagination of the people as beautiful natural life to be appreciated – a far cry from being looked upon merely as meat.

In the early twentieth century, many Europeans began taking keen interest in the birds of Assam. Prominent amongst them was Stuart Baker who remains a well-known name in the Indian Ornithology. He spent a considerable part of his career in Assam and adjoining localities. His interest mostly focused on the birds and their nesting habits and towards this end he collected specimens in great detail. His volumes on the Fauna of British India, completed during 1922-30, helped in the cataloguing of the birds in India and Assam in particular. His other publication, *The Game Birds of India, Burma and Ceylon and Nidification of Birds in India Empire* further strengthened the cause of the ornithology. The prestigious career of

Baker was followed by Hugh Whistler, another administrator in the Imperial Police Service, who significantly contributed to the study of birds in Assam. His book *Popular Handbook of Indian Birds* contained number of references to birds in Assam. Ornithology was given further popularity by people like A.M. Primrose, C.M. Inglis, F.N. Betts, Walter Koelz, R.M. Parsons and H. Stevens. Many of them were tea-planters. Their contributions to the field of ornithology lie in the discovery of new species, breeding habits and observation of their zoological behaviour. For instance, we can mention Henry Neville Colart, a medical officer employed with the Makum Tea Company, who was studying the birds in Assam since late 19th century. He began his career in ornithology by studying birds in various parts of Assam including erstwhile Naga hill districts. He had contributed to the study of birds' egg, breeding habits and also discovered two new sub-species. Another planter C.M. Inglis spent most of his Saturdays and Sundays inside the dense Katakhal reserved forest in studying the birds.

While collection and preservation of the birds' skins, classification, identification and their geographical distribution were the main features of ornithology in the pre-independence period, there was a shift in the focus of the bird lovers after independence. The vernacular newspapers had popularised bird observation in the late 20th century. Till the last decade of the 20th century, ornithology was the field of a few elite of the society. Also by the end of 20th century more money from various national and international agencies had been poured into the conservation and preservation of birds along with other, bigger, wilds. This money came to be spent either on preservation or arousing public awareness.

History of Wildlife: Looking Ahead

One significant aspect of wildlife is that by the end of the 20th century it had come to be administered by a separate wing of the forest

department. There was stricter surveillance of the wild in comparison with the colonial period when utmost attention was paid only to the question of timbers and other commercial aspects of the forest. The passing of the Wildlife Protection Act in 1972 had further strengthened the position of the forest department in the exclusive looking after of the wilds. The Wildlife Protection Act of 1972 was better equipped to handle the cause of wildlife, allowing the collective participation of the people. The Act had created another sub section within the wildlife, declaring some rare. Since the post-independence period there was more awareness about the preservation of flora and fauna. In the national arena the new political class became more sensitive to the issues of protection of wildlife. Jawaharlal Nehru's love for the wild is well known and documented. The government initiated the wildlife week celebrations with the purpose of creating awareness among the newer generations. Because of the concerted efforts of a few conservationists, wildlife protection has become more effective. Stringent laws were passed ostensibly to protect the wildlife.

In the 20th century there were various attempts to control and restrict the deterioration of the wildlife. The Governor of Assam passed an order in 1939 bringing in some amount of order in shooting. This was done mostly as a departmental order or gazette notification. Most of them drew their inspiration from Assam Forest Act 1891. Immediately after independence, there was a larger concern for the preservation and protection of animals and birds at the national level. There were now more restrictions on shooting and hunting of birds and animals in the various un-classed state forests. The department made a conclusive case that amongst the animals, deer of all kinds, buffaloes, bison and rhino; amongst the birds - peacock, wood duck and hornbills of all types needed immediate protection. In 1951 the Assam government had widened the scope of the restriction on the protection of wildlife. The government had increased the rates of royalty on animals shot under the shooting licenses, which also became dearer. The new rule had also introduced royalty at ad valorem rates on birds, animals and reptiles captured alive and exported from the un-classed

and reserved forest of the province.¹ This had not only strengthened the authority of the forest department but also moved towards wildlife awareness in the province. Shooting and hunting were always regarded as the privilege of the socially higher classes and any breach in these rights caused bitter debates within the political class.

In the post-independence period there was increasing awareness amongst the public to bring the wildlife as well as the wild zones into the urban spaces. It was thought that this would not only help in the public viewing of the wildlife or wilderness but also help in the promotion of public awareness in this regard. A plan for the establishment of a zoo-cum-botanical garden in Assam was yet to take concrete shape immediately after the independence. The forest department had no previous experience of organizing and structuring such an institution. The state government had financial support either. But the idea took shape with the establishment of The Assam State Zoo. The zoo came into being in 1957 without any major departmental initiative. The collection of various species of wild life in Guwahati in connection with the national conference of the All India Congress Committee in 1957 marked a new episode in the history of wildlife in Assam. Animals were sent from various destinations of Assam. During the year of establishment approximately thirty-nine species were housed in the zoo. Species were collected from various places of the province.² The Nepali graziers gave the elephant that was caught near Barnodi in Kamrup while the chief minister of Assam B. R. Medhi bequeathed the zoo with a Hog Deer from his personal possession. A rhinoceros was captured in Darrang and a python came from Lumding. In 1967 the number of species came down to twenty-eight but there were more varieties to be seen.

With the passage of time, human-animal relationship also underwent structural changes. The perception that the wild animals attack humans had changed. At the close of the century wild animals were forced to constantly move on in search of food and this brought them obviously in contact and conflict with humans.

Chapter-8

After Words

From wilderness to an ordered jungle, occasional trade in forest produces to brisk business in the international market and from hunting to national parks, this book then describes how forests in Assam had come to the present stage since the middle of the nineteenth century. The changes that took place during the nineteenth and twentieth century had far reaching impact in matters of forests management as well as our perception of the forest. In the meantime, the sole privilege to extract timber from the forest and to direct the future of forestry remained with the colonial forest department and it continued with little modification in the post colonial period. By creating and bringing an absolute right of the state, apart from alienating the traditional rights of the people, the colonial state converted the forest into a commercial commodity and to improve the commercial aspects, science was infused into the forests. In an exemplary way, both commerce and science went hand in hand in the management of forests in Assam like the other provinces. It must be mentioned again that the local cultural context had a determining impact on the character of the scientific experiments that were taken in the forest of Assam. Since then, the forest landscape underwent some rapid changes along with the change in the spatial distribution of forests. Compared to the earlier heterogeneous forest types, the forest now acquired a homogenous character. It would not be wrong to say that within the forest families there was now a hierarchy of importance from the commercial point of view. Potentiality of revenue return was the primary parameter through which such a stratification of timber species was achieved. But, the more revolutionary change occurred in our relation with the wild animals. This transition took place since early twentieth century. And by the middle of the last century the preservation of wildlife became a distinct arena of the forest

in India. This was more so after the World War I when emphasis was laid on modernisation of plant and equipment and increase in research staff of the FRI. A logging branch came into existence in 1957. The Logging Training Centre became operational in March 1958. This branch made significant contribution towards understanding of ecology of Sal. To obtain natural regeneration of Sal a 'Group-cum-Strip System' was developed. Similarly in the field of Ecology of Teak in 1916 the Forest Botanist published the results of experiments, which showed that clear felling had a decidedly favourable effect on the germination of the seed and on the development of the seedlings of teak. The Hand-lens Key for the identification of important sleeper wood was prepared. Growth studies in some 9 Indian forest trees were completed. FRI also ever since the inception worked on various fungal diseases of the trees viz., decay of sal, diseases of khair, toon, mulberry, gamhar etc. Treatment methods for preservation of railway sleepers were standardized. Examinations of laterite soils from Assam and Chittangong were made and also a large number of soils from experimental plots in the institute were examined for their moisture content. Soil analysis was carried out in old teak plantations of the country with special emphasis on laterite soils. Annual Report, 1928-29, para.66.

¹¹⁵ Annual Report, 1932-33, para. 42.

¹¹⁶ Annual Report, 1932-33, para. 43.

¹¹⁷ Report on the Forest Utilization and Economic Research in Assam 1939-40, bears the enormous amount of effort made by the forest department towards such an end.

¹¹⁸ Kanjilal (1913).

¹¹⁹ J.S. Gamble, the Director of the School, started the herbarium of Forest School, Dehradun in 1890. In 1908 the herbarium at Saharanpur was transferred and merged with the herbarium at Dehradun.

¹²⁰ Annual Report, 1940-41, Appendix I, para. 2.

¹²¹ The Assam Forest Records (Silviculture), 1934.

¹²² Annual Report, 1954-55, Appendix II.

¹²³ Annual Report, 1937-38, para. 90.

Chapter 7

¹ M'Cosh (1975), p. 44.

² Robinson (1975), p. 92.

³ Indian historians have lately begun paying attention to the history of Indian wildlife. Most of these works have focused on the politics of conservation of 20th century India. See, Rangarajan (2001).

⁴ M'Cosh (1975), p. 44. M'Cosh gave detailed description of the method of capturing the elephants.

⁵ Ibid. p. 45.

⁶ Pollock (1879). He was a Lieutenant Colonel and was engaged in laying out the roads in the Assam valley. He was an ardent sportsman and did lot of shooting between the years 1860 and 1870.

⁷ Stracey (1949), p. 470.

⁸ Ibid. p. 48.

⁹ Robinson described him as one of the eminent naturalists in India. His investigation was published in the Quarterly Journal, July 1837.

¹⁰ Robinson (1975), p. 92.

¹¹ Hunter in his Statistical Account of Assam gives graphic portrayal of wild animals in Assam. Allen in his Gazetteer of Assam also gives account of the wild life in Assam.

¹² Report on the Judicial and Revenue Administration of Assam, Jenkins, 1835, ASP, No. 298, Bengal Government, General Department 1836, para. 200, (ASA).

¹³ Report on the Judicial and Revenue Administration of Assam, Jenkins, 1835, ASP, No. 298, Bengal Government, General Department 1836, para. 200, (ASA). James Matthie, who was the Principal Assistant Magistrate of Darrang, prepared the report.

¹⁴ Hunter (1879), p. 176.

¹⁵ Hunter (1879), p. 25.

¹⁶ Hunter (1879), p. 25.

¹⁷ McSwiney, (1905-09), para. 13.

¹⁸ Hart (1902-1906), para. 29.

¹⁹ Mackenzie (1908-12), para. 19.

²⁰ Killing of snakes still did not attract the attention of the colonial state and only attention was given only in the district of Lakhimpur.

²¹ Thus, Hunter informs that during 1875 an estimated 287 pound, 172 pound was spent in the districts of Kamrup and Darrang respectively. Hunter (1879), p.25 and 176.

²² Proposal of Major B. Rogers Regarding the Organization of a System for the Destruction of Wild Animals in India by Means of Spring Guns, Note, Original Scheme by Captain Rogers, August, 1869, NAI, No.151-2. Home, Public, July 1875, (NAI).

²³ Note by Captain Rogers, August 1869, NAI, No.56, Home, Public, September 1871, (NAI).

²⁴ Annual Report, 1938-39, p.19.

²⁵ Annual Report, 1948-49, p.22.

²⁶ Rangarajan (1996), p. 154.

²⁷ *ibid.*

²⁸ Webber (1902), pp. 317-18.

²⁹ Baden Powell Bart (Unknown). There was a sizeable organized sport in colonial India. Various clubs took the lead in organizing such sports. The Calcutta Tent Club established in 1862, Bart claims as the oldest such club.

³⁰ Bart (Unknown), p.263.

³¹ Butler (1855), p.215.

³² Quoted in Rangarajan (2001), p.25.

³³ P.D. Stretchy quoted in Thapar (2003) p.218.

³⁴ Rangarajan (2001), p.148.

³⁵ *Ibid.*

³⁶ Though there were no straightjacket stratification we can categorize the hunters in the early 20th century Assam into two groups. One group practiced hunting to earn a livelihood while the other group preformed it for social status and other necessary social 'causes'.

³⁷ Phukan (1983).

³⁸ Choudhury (1988). Many others also left behind their accounts of hunting, See, Barua (1974).

³⁹ M'Cosh (1837), pp. 44-45.

⁴⁰ Stracey (1963).

⁴¹ Quoted in Thapar (2003), p.218.

⁴² Members of the Gauripur Zamindari kept elaborate records of their shikars.

⁴³ Gee (1952) p. 219.

⁴⁴ This is being discussed elsewhere in this chapter.

⁴⁵ See, Thapar (2003).

⁴⁶ Act VIII of 1912. Annual Report, 1913-14, para. 199.

⁴⁷ Annual Report, 1920-21, para. 238.

⁴⁸ *Ibid.* para. 238 and 47.

⁴⁹ ASP, No.35-46, Revenue-A, February 1913, (ASA).

⁵⁰ Annual Report, 1916-17, para. 221.

⁵¹ For details of the Nilgiri Game Association, see, Stebbing (1909).

⁵² Letter from J.C. Arbuthnott, Commissioner of Assam Valley to the Secretary to the Chief Commissioner, Assam, 4 November 1902, ASP, No.75-134, Revenue-A, September 1905 (ASA). The names of Lord Curzon and Lady Curzon are commonly associated with the preservation of rhino in Kaziranga though none of them played a central role in the story of Kaziranga.

⁵³ In Bengal the killing of the rhino was already prohibited.

⁵⁴ Letter from F. J. Monahan, Secretary to the Chief Commissioner, Assam to the Commissioner of the Assam Valley Districts, No. 12, Forests-1283R, Shillong, 15 March 1904, ASP, No.75-134, Revenue-A, September 1905, (ASA).

⁵⁵ *Ibid.* J. Donald, Deputy Commissioner of Sibsagar wrote to the Commissioner, Assam Valley that he spoken to 'several gentlemen who are acquainted with the tract, and have been shooting therein, and all are of opinion that the tract should be certainly be reserved in order to prevent the extermination of the rhinoceros'.

⁵⁶ *Ibid.* The tracts thus identified were mostly without cultivation, the official argument was on the line of chief commissioner's wishes.

⁵⁷ Before independence, many politicians and colonial administrators

including forest ministers of Assam visited Kaziranga many a times. The governor of Assam visited Kaziranga during 1939. It was mentioned that during the two mornings of his stay 17 rhino were seen at close quarters, in addition to buffalo, sambhar, swamp, and hog deer, pig, otter and a variety of birds. Annual Report, 1938-39, p.19.

⁵⁸ Annual Report, 1939-40, para.164.

⁵⁹ Annual Report, 1944-45, para. 98.

⁶⁰ Rangarajan (2001), p. 87.

⁶¹ Note by Deputy Conservator of Forest, Memo no. A 76, May 25, 1955, Shillong.

⁶² ASP, No.19-33, Finance Department, Forest-A, January 1907, Government of Eastern Bengal and Assam (ASA).

⁶³ Annual Report, 1940-41, para. 147.

⁶⁴ Choudhury (2000), Appendix-4, p.223.

⁶⁵ One Bhimbahadur Chetri, regarded by the department as 'keen and energetic' game watcher was killed in the Sonai-Rupai Sanctuary. Annual Report, 1938-39, para.119.

⁶⁶ Annual Report, 1938-39, p.19.

⁶⁷ Annual Report, 1938-39, p.19.

⁶⁸ Report on Inspection of Manas Reserve no. 368, ASP, No.286-294, Revenue Department, Forest Branch, Forest B, June 1931 (ASA).

⁶⁹ Gee (1952), p. 216.

⁷⁰ Government Notification No. 2594-G.J., 1 May 1939. This order came into retrospective effect from 1 June 1938. This was made also applicable to the excluded areas. Annual Report, 1939-40, para. 32.

⁷¹ Annual Report, 1945-46, para. 127.

⁷² Bhardhan (1934), pp.802-811; Milroy (1934), pp.97-105.

⁷³ Wildanimals were still shot inspite of various regulations. For instance, the following statement of Wild Animals Shot in Assam during 1945-9 prepared from Annual Reports show the gravity of the problem. Accordingly, though it is a highly conservative estimate, Tiger-182, Tigress-26, Leopard -115, Wild cats-54, Cheetah-8, Wild dog-131, Himalayan black bear-2, Sloth bear-65, Wild elephant-93, Rhino -

9, Mithan-6, Wild buffalo-12, Goral-21, Barking deer-471, Swamp deer-31, Spotted deer 97, Hog deer-239, Pigs—289, Porcupines-116, Wild monkeys-237, Ape-32, Squirrer-243, Jackels-25, Hares-10, Crocodile-2, Python-103, Turtle-422, Fruit Pigeon-280, Horn bill-8 were killed during this period.

⁷⁴ Annual Report, 1948-49, para. 130.

⁷⁵ Report of D. Baruah, Divisional Forest Officer, Sunai-Rupai Sanctuary, Annual Report, 1940-41, para. 150.

⁷⁶ File no. Forest/WL/178/59, 1959, (ASA).

⁷⁷ Chief Minister's Fortnightly Letters to the Prime Minister, File No. CMS 4/54, 1954, (ASA).

⁷⁸ Act IX of 1969 Sec, The Assam Gazette, 4 September 1968.

⁷⁹ Notification no. For/WL/722/68 dated 11 February 1974, The Assam Gazette, March 27, 1974.

⁸⁰ For a colonial history of elephant, see, Lahiri-Choudhury (1999).

⁸¹ For a good account of ivory craft in the 19th century Assam, see, Saikia (2000), pp.53-58.

⁸² The colonial and post-colonial native literary figures used elephant as important literary image to highlight to social tension of the society.

⁸³ Written by Sukumar Borkath during the eighteenth century under the guidance of Ahom king Siv Singha and his wife Ambika Devi. Two illustrators Dilbar and Dosai had done the illustrations for the manuscript. See, Choudhury (1975).

⁸⁴ Choudhury (1975).

⁸⁵ Letter of Superintendent of Kheda to the Secretary to the Chief Commissioner, Assam, 20 September 1881, ASP, No.34R, 1881, (ASA).

⁸⁶ Nongbri (2003), p.3192.

⁸⁷ Letter from G.P. Sanderson, Superintendent of Kheda, Dacca to the Assistant secretary to the Chief Commissioner of Assam, 17 September, Simla, ASP, No. 34R, 1881, (ASA).

⁸⁸ The number of elephants caught by lessees in Assam alone during 1877-80 is as follows: 77-78-172, 78-79-338; 79-80-122. Out of this 60 either died or was released. The supply of Tipperah was on an average was 50 per annum. A large number of elephant was also annually im-

ported into India from Burma and Siam. The Madras Commissariat department had been exclusively supplied by shipment from Burma for many years.

⁸⁹ During 1863-76 India imported 1659 numbers of elephant from Ceylon. Letter from G.P. Sanderson, Superintendent of Kheda, Dacca to the Assistant secretary to the Chief Commissioner of Assam, 17 September, Simla, ASP, No. 34R, 1881, (ASA).

⁹⁰ Sivaramakrishnan (1999), p.102.

⁹¹ From Assistant Secretary, Department of Agriculture, Government of Bengal to the Commissioner of Assam, 9 June 1873, Government of Bengal Papers no. 6, File no. 6/1a, 1873, (ASA).

⁹² Nongbri has discussed in detail about the protected legal history. See, Nongbri (2003).

⁹³ Messers J. Mackillican and Company to Secretary to the Board of Revenue, 21 January 1873, File no.6 (1a), Papers 6, Government of Bengal, (ASA).

⁹⁴ From J.W. Edgar Junior Secretary to Government of Bengal to the Secretary of Government of India in NAI, No. 63-64, RAC, Forests, December 1883, (NAI).

⁹⁵ Annual Report, 1875-76, p.79.

⁹⁶ From Henry Hopkinson to the Secretary to the Bengal Government, File no. 74/113, Judicial Department, Papers 6, Government of Bengal, (ASA).

⁹⁷ Letter of J. Errol Gray to W.F.L. Tottenham, 28 April, 1917, ASP, No. 107-133, Finance Department, Forest-A, July, 1919, (ASA).

⁹⁸ Report of A.J. Milroy, ASP, No. 107-133, Finance Department, Forest-A, July 1919, (ASA).

⁹⁹ Letter from G.P. Sanderson, Superintendent of Kheda, Dacca to the Assistant Secretary to the Chief Commissioner, Assam, 17 September, Simla, ASP, No.34R, 1881, (ASA).

¹⁰⁰ During 1875-80 the Assam government bought 174 numbers of elephant under this clause from the lessees. Letter from A.D. Campbell, Superintendent of Kheda in Lakhimpur to the Officiating Secretary to

the Chief Commissioner of Assam, 27 December, ASP, No.34R, 1881, (ASA).

¹⁰¹In 1825-26 the Dacca stud had about 300 elephants. As Assam was part of the Bengal province since 1874, we also need to understand the dynamics of these complex issues here.

¹⁰² Major A.D. Campbell was the Superintendent of the Kheda during 1880-81.

¹⁰³ Demi-official Letter of J.L. Errol Gray, 28 April 1917, ASP, No 107-133, Forest-A, 1919, (ASA).

¹⁰⁴ A company entitled Kashikata Komarbari Elephnat Catching Company, one Tileswar Barua was its secretary, based in Bihpuria, Lakhimpur made eight captures during 1958. Letter from Conservator to the Secretary to the Department of Forest, Letter No. C-168/55-56, Shillong, 22 September 1955, (ASA).

¹⁰⁵ Elephant Establishment in Goalpara, Government of Bengal Papers, File no. 72/111, Papers-2, Agriculture Department, (ASA).

¹⁰⁶ Goalpara Papers, File no.62, Government of Bengal Papers, 1868, (ASA).

¹⁰⁷ The figures in this table are prepared from the Annual Land revenue Administration Report for Assam during 1875-1900. These figures are for the Brahmaputra valley districts and it included both license fees and royalty.

¹⁰⁸ Letter of J. Errol Gray to W.F.L. Tottenham, 28 April 1917, ASP, No. 107-133, Finance Department, Forest-A, July, 1919, (ASA).

¹⁰⁹ He authored an important text on the elephant hunting operation.

¹¹⁰ A.J.W. Milroy to the Chief Secretary of Assam, ASP, No.432, Forest B, September 1931, (ASA).

¹¹¹ ASP, No.1-8, General Department, Military-A, June 1903, (ASA).

¹¹² Letter of J. Errol Gray to W.F.L. Tottenham, 28 April 1917, ASP, No. 107-133, Finance Department, Forest-A, July 1919, (ASA).

¹¹³ Letter from A.W. Blunt and W.F.L. Tottenham, Conservators of Forest in Assam to the Chief Commissioner of Assam, 4 September 1918, ASP, No. 107-133, Finance Department, Forest-A, July 1919, (ASA).

¹¹⁴ Letter from A.W. Blunt and W.F.L. Tottenham, Conservators to the Chief Commissioner of Assam, 4 September 1918, ASP, No. 107-133, Finance Department, Forest-A, July 1919, (ASA).

¹¹⁵ Notes, ASP, No.54-73, Forest-B, September 1931, (ASA).

¹¹⁶ Ibid.

¹¹⁷ Based on report submitted by Rupnath Brahma in the Assam Legislative Assembly, 11 March 1941.

¹¹⁸ File No. 209/59, Forest, Wildlife, 1959, (ASA).

¹¹⁹ It happened in the mid of the century. Gee mentioned about the death of 55 wild elephants in the North Cachar Hills due to epidemic. Gee mentioned that a decade ago more elephants died along with bison in the same hill. Gee (1952).

¹²⁰ Ministry of Forest and Environment Report for 1997-98, Government of India, Delhi. During the year an amount of Rs.4.50 cores was allocated to the elephant range.

¹²¹ A Lucknow based Carlton Company promised a client 'a tiger per fortnight', using a hundred beaters and tying up a dozen buffaloes as bait. Rangarajan tells us that the Indian government was also tempted to advertise the country as a 'heaven for those with gun and fishing rod'. A decade after the independence the famous American travel writer Jack Denton came to India as state guest to partake of the pleasures of the hunt and publicize them abroad, Rangarajan (2001), p.95.

¹²² For an interesting account of tiger in Indian history, see, Thapar (2002).

¹²³ This move was strongly resented by the commercial safari operators and old time hunters. Ban on tiger shooting was brought in July 1970.

¹²⁴ Ban on tiger shooting was brought in July 1970.

¹²⁵ Rangarajan had discussed the role played by Indira Gandhi as a young prime minister in the saving the tiger. She was associated with Delhi Bird Watchers Society, had traveled to Kenyan wildlife reserve and had close connection with the new generation of wild life lovers within the ranks of bureaucracy.

¹²⁶ Prominent among them was M.K. Ranjitsinh and Kailsah Sankhala.

The latter was critic of shikar and commercial forestry and presented a paper entitled 'The vanishing Indian Tiger' in the IUCN conference of 1969. He played the key role in the drafting of the Wildlife (Protection) Act of 1972.

¹²⁷ Established in 1960, WWF played major role in activating governmental awareness for the wildlife.

¹²⁸ Forest and wildlife were brought under the concurrent list of the constitution in 1976.

¹²⁹ A census taken in 1969 had a figure of 2500.

¹³⁰ Project Tiger Status Report, 2001, Ministry of Environment and Forests, Government of India.

¹³¹ Amongst the principal rivers flowing the reserve are Sankosh, Saralbangha, Hel, Tanali, Courang, Sidli (Bhor) Aio, Manas, Beki, Pathimari, Kaladia, Tihunala, Morapagaldia, Nala, Braalia, Bornodi and Dhansiri.

¹³² A Management Plan for Manas Tiger Reserve and Orang Charduar area 1973-74 to 1978-79, Chief Conservator of Forest, Government of Assam, Shillong, 1973.

¹³³ Ibid.

¹³⁴ Gee had specially mentioned about the career of Milroy in Gee (1952).

¹³⁵ Stracey (1949), p.470.

¹³⁶ Thapar (2003).

¹³⁷ Rangarajan (2001), p.85.

¹³⁸ The life sketch of Robin Banerjee is based on various newspaper articles.

¹³⁹ A detailed bibliography of works published on the birds of Assam in this journal can be found in Choudhury (2000).

¹⁴⁰ The following is based on Choudhury (2000).

¹⁴¹ File No. Forest Department, Forest, Wildlife, 337/56, 1956, (ASA).

¹⁴² This account is based from the stock book of the Assam zoo. According to a popular anecdote, on the very first day of the opening of the zoo, the tiger had disappeared from the captivity.

Chapter - 8

¹ The move was protested by the state administration and did not see light. See File no. Chief Ministers Secretariat, 304/64, 1964 (ASA).

² By the end of the 2003 Assam had 503 number of Joint Forest management committees which involved 67341 number of families covering a total area of 79251 hectare.

³ The late 20th century example of Tengani in Golaghat can be located in this framework.

⁴ V.K. Bahuguna, IG Forest, Presentation on Problems of Encroachment on Forestland, RUPFOR series number 3, November, 2002.

⁵ Such a concern found expression when the Assam Forest Protection Force was created.

Glossary

<i>Bhil</i>	a widely spread out body of stagnant water
<i>Bigha</i>	measure of land is roughly equal to one third of an acre
<i>Chur</i>	sand bank
<i>Daffador</i>	labour contractor
<i>Doloni</i>	shallow land
<i>Gossains</i>	head of the vaishnavite monastery or satra
<i>Hat</i>	weekly market
<i>Jhum</i>	shifting cultivation, swidden fields
<i>Jhumming</i>	shifting cultivation
<i>Kheda</i>	elephant chasing or trapping and capture
<i>Khoonti</i>	trained elephant used for elephant catching
<i>Koonkie</i>	the trained elephant used in elephant capturing
<i>Lac</i>	deposit of the lac insects
<i>Lakh</i>	one hundred thousand
<i>Matban</i>	platform inside forests from where hunters wait for the animals
<i>Matikhula</i>	natron deposit
<i>Maund</i>	measure of weight approximately 82 lbs.
<i>Mauza</i>	revenue unit formed by a number of villages
<i>Mauzadar</i>	revenue official in charge of a mauza
<i>Mechies</i>	wood cutters
<i>Nals</i>	measurement of land by hand
<i>Paik</i>	peasant liable for service under the Ahom government
<i>Patta</i>	land document given by the government to individual peasant
<i>Pattadars</i>	landholders
<i>Pergunneh</i>	estate
<i>Pung</i>	salt licks
<i>Raiyat</i>	peasant
<i>Shikar</i>	hunting