Forests and Ecological History of Assam, 1826–2000

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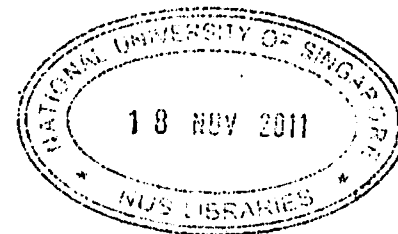

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123. U.G. Kanjilal, 1913, *Flora of Assam*, Simla: Government Press.

124. These data collected from Lakhimpur and Sadiya divisions were for the specific trees of ajhar, hollong, hollock, nahor, jutuli and simul. See, The Assam Forest Records (Silviculture), 1934.

125. P.D. Stracey, 1949, *Assam's Economy and Forests*, Shillong: Government Press, p. 17.

126. *Annual Report, 1954–55*, Appendix II.

127. *Annual Report, 1937–38*, para. 90.

128. F. K. Ward, 1940, 'Botanical and Geographical Exploration in the Assam Himalaya', *The Geographical Journal*, vol. 96. no. 1, pp. 1–3.

6 From Game to Wildlife Conservation
Redefining Conservation

> 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.[1]
>
> W. Robinson

While the forests and natural landscape of Assam bewildered nineteenth century observers equally challenging was the subject of wildlife. The latter was not only a favourite pastime subject but the very survival of the forestry programme began to be contested by the wild animals. Similarly, the Assamese practised both hunting and revered them. Assamese folktales tell how the villagers often stayed away from dense forest for fear of wild animals.[2] However, as the colonial government expanded its agrarian frontier it was obvious that vermin eradication became the official policy in regard to wildlife management. Even when forest conservancy came to play an important role in the agenda of colonial history, conservation of wildlife still occupied the back seat. Since the early nineteenth century there was significant change in the history of wildlife in Assam in matters of understanding and its relation to the native society. The colonial interest in the protection of wildlife is a much later phenomenon. This was signified by the occasional legislative pieces and increasing interest shown in the protection of wildlife by the colonial administrators. The significant point is that in wildlife conservation it was not only the foresters but also the large flocks of colonial as well as

non-colonial personnel who took active interest in safeguarding wildlife. In Assam, the earliest attempt came in the form of the establishment of game reserve as early as 1905. Since then it was a long journey and there grew a considerable number of wildlife parks, sanctuaries, and so on in the post-Independence period. The State took the initiative, though albeit fragmented, in the generation of awareness in wildlife protection. In the 1970s and 1980s there was increasing participation of the local wildlife lovers. In the 1990s and then onward, the wildlife issue got more prominence in the vernacular press. The third generation of the wildlife lovers have come from a different background. Many of them have professional expertise in the science of wildlife preservation.

Agrarian Frontier and Colonial State: Battling Wild Animals

The peasants' understanding of the wildlife in Assam, as in other provinces, was directly related with the 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 as the agrarian frontier expanded. The peasants did not have any modern weapon to tackle the wild animals' menace. 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 noted the status of wildlife as follows:

> 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.[3]

The expansion of the agrarian frontier continued to face grave threat from the wild animals (Fig. 6.1). Presence of wild animals also kept the peasants away from expanding their agrarian frontier in the foothill areas. Such reports can be seen throughout the colonial period. A conservative estimate made during the early decades of colonial rule paints a grim picture of the number of the people killed by the wild animals in the Darrang district.[4] According to this estimate, wild elephants killed 17 people in the year 1833 while in the next year 17 lost their lives. In 1833, wild buffaloes killed 2 people. Tigers killed 12 people duirng 1833–4

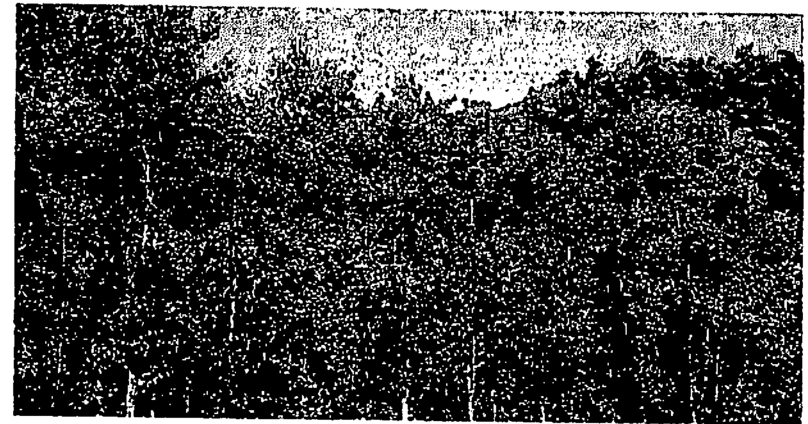

Fig. 6.1 Plantation during the colonial era. Reproduced from *Annual Progress Report on Forest Administration of Assam*, Assam State Archive

while 3 people were killed by wild pigs. Alligators killed one person during 1834. Writing in 1879, W. Hunter also took notice of the large-scale damage done by the wild animals to the crop and humans. He thus 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'[5] while in Kamrup '129 persons were reported to have lost their lives from wild beasts or in consequence of snake bites' in 1868.[6] Hunter wrote that the peasants in other districts also shared a similar experience. The devastation was so detrimental to the peasant society that, Hunter informs, in Kamrup during 1866–7 the entire population of a village left the village.[7] Elephants often frequented the villages during the harvesting season and caused problems for the villagers for their crop in the district of Darrang.[8]

Early in the twentieth century both the revenue and agricultural departments continued to show their dismay at the damage done by the wild animals. Describing the condition of the erstwhile Sibsagar district one report 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'.[9] The report further suggests that killing of cattle by tigers was very common. In the district of Lakhimpur, another report tells of 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'.[10] The number of cattle being killed by a variety of wild animals kept haunting the Forest Department. The matter deteriorated to such an extent that between 1892 and 1893 one report estimates that an approximately 34,080 numbers of cattle were killed by wild animals.[11]

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 killing of a tiger was Rs 5 and Rs 2.80 for a leopard. Within the next couple of years there was a considerable increase in the prize money to Rs 25 for a tiger and Rs 5 for a leopard.[12] 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.[13]

The imperial design for the extermination of wild animals took shape along with the agrarian expansion and the management of the vast forest areas. Extermination of the wilds was necessitated by, both constructed and imagined, 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 earnest, anticipating the obsession of the late nineteenth century. While imperial intrusion in this phase in hunting in India may have been limited, it was a foretaste of the future.

In the meanwhile, Richard Temple had redefined the system of disbursing rewards for killing carnivores in a much more systematic way. In the meantime, one army officer Captain Rogers proposed an eccentric scheme to exterminate tigers. His plan led to intense debate and finally was 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 tigers.[14] He further admitted that this strategy was unsporting and bound to be viewed with 'supreme care'. *Shikaris* (hunters) in each district in British India were to be organized into regular bands to implement the scheme.[15] Led by the British army officers, they would reduce the number of wild animals. The general impression was

Fig. 6.2 Hunting for trophy became widely popular. A tiger after being hunted. Reproduced from *Annual Progress Report on Forest Administration of Assam*, Assam State Archive

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

The extermination of the wild animals continued into the twentieth century. Large-scale opening of agricultural land in the 1930s and 1940s had depleted the numbers of wild animals to the worst-ever level. As the twentieth century progressed there was a sharp break from the conventional wisdom about the wild and its impact on the agrarian history. Thus, in the beginning of the career of wildlife sanctuaries the department believed 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'.[16] A forest officer from Goalpara found the expanding agrarian frontier to be the sole reason for the continued poaching and trespasses into the reserved areas.[17]

ENCOUNTERING WILD ANIMALS AND UNDERSTANDING TRADE

In the nineteenth century, as the officials of the East India Company ventured into the dense jungles of Assam they encountered the wild animals. Within a few years as the company consolidated its political position they officials took their time off to enjoy a moment of leisure and went out for shooting and hunting (Fig. 6.2). Such history of the wildlife in nineteenth-century Assam was a period of understanding and hunting for leisure.

In 1837, in one of the earliest accounts, John M'Cosh described the contemporary practices of trade in wildlife and their distribution. M'Cosh wrote that 'wild elephants are plentiful, and move in large herds, and are very destructive both to the crops and to human life; entering villages in daylight, and plundering granaries, and stores of salt, of which they are very fond.'[18] Describing the nature of the Assamese people's attitude to these animals he mentioned that they were caught in large numbers in every season and were transported to various countries. He also estimated that approximately 700–1,000 elephants were exported from Assam every year. A duty of Rs 10 was levied at Goalpara on every elephant exported. However, he believed practices to be crude and to substantiate his argument he mentioned how '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'.[19] M'Cosh's list of animals found in the region was rather long. 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 conflict between the 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 nineteenth century, there was a reward of five rupees a head allowed by the government for extermination of every tiger. M'Cosh referred to this as caste practice and also a profession. He further mentioned that wild buffaloes, larger than those of the neighbouring Bengal, were found in abundance. In his description there was further mention of cows, horses, sheep, hogs, poultry, porcupines, snakes, leeches, white ants, crocodiles, tortoise, porpoises, and fish. Wild games were found in abundance. 'Deer, hares, jungle fowl, pheasants, peacocks, partridges, florican, snipe and weather fowl of all descriptions are procurable but no game keepers interest themselves in catching them'.[20]

M'Cosh's account will remain incomplete if we do not take account of his contemporary, Robinson. With Robinson, the study of wildlife became part of zoology. He included quadrupeds, birds, reptiles, fishes, and insects in his study. Robinson mostly relied on the extensive survey done by physician McClelland.[21] 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 is it for the variety, splendour, and singularity of its forms, that it is difficult to say in which department it is most interesting'. At the same time Robinson was all in praise for the geology and climate of the region. 'Flourishing beneath a genial clime, and nourished by dense vapours and frequent showers, in a soil naturally humid, vegetation here attains luxuriance inconceivably magnificent'.[22] The wildlife had taken the blessings of this geology, resulting in brilliant colours and singular shapes. His contemporary, Griffith, however, diverted his attention more to eastern areas of the province and meticulously described the spatial distribution of birds found there.[23]

That trade in wildlife could play a crucial role was noticed by Jenkins. He reported that merchants from Bengal made an annual visit to all parts of the province with *koonkees* (decoy elephant) to catch wild animals and were generally very successful. Jenkins thought that out of the 600 or 700 elephants caught in Assam in 1850, around 500 were exported, whereas in the next year about 900 were caught. Newly caught elephants could often be purchased, if under five feet in height, 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.[24] A few years later Mill also observed that both ivory and rhinoceros horn were exported from Assam.[25] 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.[26]

HUNTING, SPORT, AND LIVELIHOOD PRACTICES

> Not less exciting is the rhinoceros hunt. This animal is found in the highest and most dense reed jungle, generally near a river or Bheel lake, in a very

miry place. The squeaking grunt of this beast is peculiarly sharp and fierce, and the elephants become so alarmed that few wait its approach in the shape of a charge, but mostly quit the field with utmost speed, scarcely giving the sportsman time to have a shot.

John Butler, 1855[27]

In the nineteenth century, the relationship between the wildlife in Assam and colonial state was never cordial, as was anywhere in the colonial world. While the few big animals were either ruthlessly killed or maimed, many escaped this cruelty. The most illustrative of them was the elephant, who, as the luckiest one, provided the colonial state with substantial revenue. The number and variety of unlucky ones, however was more widespread, though game was not a very favourite activity in Assam mainly because of the soil condition of the region. Illustrative of such game in Assam was pig sticking. Regarded as a masculine game and also popular among the European civil servants, the game faced hostility from the topography. The sticky soil worked as a deterrent to the fast action needed by pig sticking. The conditions of the sport had been best described 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.[28]

Colonel F.W.T. Pollok, with seven years of experience of sport in Assam, had no doubt that 'there is no country—not even Africa—where there is more and varied game than Assam and Burma.[29]

The Assamese, across classes, were generally characterized by alluvial inundated grasslands comprising tropical wet evergreen forests and tropical semi-evergreen forests. Nonetheless, the riverine belt of the river Brahmaputra became a hunting ground for the British officials as well as other European tea-planters.[30] The region's topography, soil quality, and long spell of rainy seasons meant that sportsmen look for some innovative games. It would be wrong to suggest that hunting was merely a European activity.[31] The Assamese, across their class position, participated in the hunting. As it was not merely confined to the higher echelons of the society, the poor too killed wild animals. However, it is difficult to qualify the level of destruction of the game by the British and the Assamese. In all probability, three distinct cultural layers for hunting could be identified.

The first of these categories was that of British sport. In the middle of the nineteenth century, Major John Butler of the 55th Regiment of the Bengal Native Infantry found the sport in Assam as an exciting pastime for the 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'.[32] Butler informed the various forms of sport, namely, tiger, elephant, rhino, and deer sport. 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 had no doubt that in western and central Assam one could easily come across incalculable devastations of the paddy fields by large herds, which might sometimes comprise of hundreds of buffaloes. T.T. Cooper, a British sportsman in Assam, said of the wild buffalo, 'it was so numerous and so destructive as to be an absolute pest'.[33] Captain Pollock, a military engineer responsible for laying down the road networks in the Brahmaputra valley in the nineteenth century, an anecdote claimed, shot dead one rhino or buffalo for every breakfast.[34]

The Indian hinterland was richer than England in terms of the availability of game animals. Europeans were keen to experience 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, 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'.[35] 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 80–100 yards of the animals.[36] Kaziranga, to be declared a game reserve in the early twentieth century, was a planter's heaven for the sport in rhino, as can be found in a later account of E.P. Gee who had first-hand account of the game reserve in its early days. Gee, describing the condition of sport in Kaziranga in the late nineteenth century, writes:

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.[37]

The hunting practices of the colonial officials expanded and a variety of animals came under their shot. Reminiscences of these sports could be found in various forms.[38] The notion of adventures and easy reach to the animals, conditioned by the official formalities, now began to determine the nature of game. H.E. Shortt, the imperial malaria officer, with his extensive tour programme and busy official duties had to confine himself to crocodile, hunting in Guwahati in the river Brahmaputra.[39] Such game was of temporary nature with less fanfare and yet they gradually began to inflict less damage to the wildlife. Shortt's notes meticulously narrated the physical behaviour and distribution of Indian crocodiles with accuracy. Others, using their social and political privileges, went on practising game with fanfare till the middle of the century.[40] Sport destroyed the animals at a ferocious speed and only rarely contributed to the increasing wealth of knowledge on wildlife.[41]

The next layer of hunting could be associated with that of the Assamese elites. Such hunting practices went beyond the purposes of recreation and could be linked with the question of cultural negotiation with the colonial elites. There was a good social network amongst these families, both within Assam and outside it. A few illustrations would provide a better understanding of this aspect. Tarunram Phukan (1877–1937), an early nationalist and Swarajist and barrister, was known for his skill in shooting practices. This was particularly true for elephant hunting. Photographs with his trophies from game were a familiar picture of Tarunram Phukan. Phukan also trained local people, mostly belonging to the tribes, as a helping hand for his hunting. *Shikar Kahini*, a memoir on hunting by Phukan, vividly captures his struggle to become a good hunter.[42] Other members of his family, including his father, were also known for good skill in hunting.[43] His elder brother, Nabinram, served as a trainer for the local colonial officers in their hunting lessons. The Maharaja of Cooch Behar was also a close family friend of Phukan by virtue of their hunting practices. To obtain the reputation of a good *sikari* (hunter) such networks were important and desirable.

Hunting was more popular in western Assam. Hunting in these areas upheld one's social status—a higher social status required a more ferocious animal to be hunted. Prasannalal Chaudhury (1898–1986), an Assamese nationalist and also a well-known literary figure, born and served in western Assam, recounted in his autobiographical memoir how he learned skills of hunting from his own family tradition.[44] His father, a tahsildar, had a glorious career in hunting. Another example is that of the ruling families of Cooch Behar.[45] They regularly visited the various forests in the northern bank in western Assam for hunting. Often they escorted colonial bureaucrats into these hunting camps. Such hunting was with great fanfare, involving large number of peasants. The common victims were rhino, elephant, and tiger. Between 1871 and 1907 Maharaj Nripendra Narayan shot dead no less than 370 tigers, 208 rhinoceroses, 430 buffaloes, and 324 barasingha deer.[46] Display of tiger skin or elephant tusk, collected from such hunting events, in the private portico of these families is another familiar story. The narratives of hunting in the families of Gauripur zamindars still play an important role in the social and literary imagination of Assam.[47] Another member of these landlord families Prakitish Chandra Barua, also known as Lalji, admitted how he hunted and killed 111 cheetahs between 1926 and 1965.[48] Compared to such hunting involving killing we can notice a fairly low rate of damages being inflicted in elephant hunting. The forests of south Assam, presently part of Bangladesh, were also a favourite ground for elephant hunting.[49] Most importantly, elephant hunting not only followed rules of nature, an aspect Prakitish Chandra Barua had so emphatically stressed, but it helped in the formation of a corpus of knowledge of practices. Plenty of folklores around such hunting practices are clearly indicative of such a knowledge system. It was the relationship of elephant to the political economy of social authority and wealth that played a central role in keeping the elephant in such high esteem. But all such hunting practices, collectively shared by the Assamese elites or zamindars of Goalpara, fell little short of from the spread and aggressiveness that their British counterparts had injected into the forest of Assam.

The third form of hunting was that of peasant communities who made regular forays into the jungle to kill animals for various reasons—the purpose of livelihood being the most significant one. Such hunting practices were regulated by a wide variety of popular customs. There was no distinct species of fauna that were targeted by the hunters. Some were killed for mere joy while many were brought down for meat. The ways and ends of these practices differed according to the needs of the strata involved in it. British officials began to ascribe cruelty with such hunting practices. The best example of such emphasis on cruelty was that of M'Cosh, who as early as 1837 mentioned that in the northern frontier of the province 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'.[50] Later writers, though not

necessarily focused on the ravages of such practices, noticed the wide variety of such skills.[51]

Illustrative of such utilitarian needs is that of western Assam where buffalo was also hunted for the purpose of domestication. It was believed that the wild animals that were domesticated gave more milk and were better suited into the ecological context of the rural side of Assam compared to the animals bought from the markets in Bengal. The hunters took extreme care not to hurt such animals. For instance, elephant catching involved many rituals and other cultural practices. The question of enjoyment or sports came to be associated naturally herewith. Peasants took recourse to tiger hunting as a measure to protect the agricultural production. Popular hunting was only widely practised during flood. The wild animal was looked upon with fear and could be the cause of various damages to the everyday lives of the peasant society. Such stories can often be found in the Assamese folktales.

Wildlife, Zoology, and Science of Conservation, 1830s–1940s

The subject of understanding wildlife beyond the parameters of game or mercantile trade began with the arrival of both amateur wildlife lovers and professional zoologists. It began with species like birds or reptiles. Since the middle of the nineteenth century we come across early initiatives that could be indicated as part of the early science of zoology. One of the earliest accounts of the region went back to the 1830s when the Asiatic Society of Bengal carried out investigation into the zoological behaviour of mammals of the region.[52] The society further undertook a similar survey when, in 1851, Edward Blyth (1810–73), the British zoologist and curator of the museum of the Royal Asiatic Society of Bengal, extensively reported on the mammals, birds, and reptiles in Khasi hills.[53] His observations were based on a survey carried out by fellow zoologist R.W.G. Frith. Blyth's observation came along with the survey of plants of the region during an extensive survey taken by Joseph Dalton Hooker between 1847 and 1850. Hooker rarely ignored to observe the fauna.[54] Many zoologists would come across newer varieties of animal species through such supplies from the colonies. Company officials often 'gifted' animal species to their Naturalist friends and mentors in London. William Jardine Bart (1800–74) received species of a hollock from the Garrow hills from Captain A. Davidson posted in Goalpara.[55]

These developments reached out to a wider audience with the publication of the *Journal of Bombay Natural History Society*.[56] The journal issued a series of essays based on these amateur observations and notes, mostly on birds and reptiles. Birds came to capture the imagination of the people from mere meat to natural life came to be appreciated. Prominent among them was E.C. Stuart Baker who was a well-known name in the Indian ornithology by that time. He spent a considerable part of his career in Assam and the adjoining localities. His interest mostly focused on the birds and their nesting habits, and towards this end, collected their specimens in great detail. Between 1892 and 1901 he published a number of essays on the birds of north Cachar hills and Cachar.[57] Decades later he returned to Assam and reported from both eastern hills and Khasi hills.[58] Since then his 'Fauna of British India', completed during 1922–30, helped in the cataloguing of the birds in India and Assam in particular. His *The Game Birds of India, Burma and Ceylon and Nidification of Birds in Indian Empire*, published in 1932, further strengthened the cause of ornithology. Several others, including a number of tea-planters, followed the professional career of Baker.[59] For instance, Henry Neville Colart, a medical officer employed with the Makum Tea Company, studied birds since the late nineteenth century. He began his career in ornithology by studying birds in various parts of Assam, including the erstwhile Naga hill districts. His interest was to study birds' egg and breeding habits. He also discovered two new sub-species. Charles McFarlane Inglis (1870–1954), a planter, spent most of his Saturdays and Sundays inside the dense forest, studying the birds. Another amateur ornithologist Dorothea Craigie Milburne, who happened to be a tea-planter's wife, took passionate notes of her observation of birds found in her garden. She used to communicate her findings with Inglis though the latter often failed to clarify her doubts.[60] The ornithology came to be consolidated based on the discovery of new species, understanding of their breeding habits, and observation of their biological behaviour. Collection and preservation of the birds' skins, classification, identification, and geographical distribution of birds were the main features of ornithology in the pre-Independence period. This gradual shift from an aggressive damage to the appreciation of wildlife came to be reflected in the works of H.S. Nood, belonging to the Indian Medical Service and a civil surgeon and hunter, who passionately recorded and commented on animals, birds, reptiles, and insects.[61] In the meanwhile, printed Assamese literary journals also began to publish essays on wildlife. Most of them were in descriptive in nature, translated from English and generally followed the path of European science. That

growth of wildlife science essentially based on Euro-centric focus on zoology seriously weakened traditional understanding of fauna is beyond doubt.

Till the middle of the twentieth century zoology and the science of conservation was primarily in the hands of the Europeans. It was they who regulated and shaped the career of this science. Rather than big mammals it was birds and reptiles that played a key role in drawing attention to this region. Gradually people who manned the Forest Department began to show keen interest in the lives of animals away from the powerful paradigm of animals as an element of anti-forestry. An example of this shift was the career of the forest conservator A.J. Milroy. During his career in Assam, Milroy directed his attention to the well-being of the elephant and successfully integrated this changing paradigm with the institutional practices of imperial forestry.[62] P.D. Stracey, a contemporary of Milroy, had further advanced the cause of the elephant.[63] Since then the subject gained further institutional support and the fauna of the region became part of the larger science. Similarly, making a departure, another planter E.P. Gee helped in comprehensively reorienting the space given to fauna within the political practices of the province. Not only did he direct key attention to the big mammals but he also helped the animals to become part of the larger nationalist discourse.

Privileged Hunting, Wildlife Crime

Already there was enough hunting and sport mainly by the colonial officials as well as the European planters. As mentioned above, Kaziranga, which was declared a game reserve in the early twentieth century, was a planter's heaven for the sport in rhino. E.P. Gee, describing the condition of sport in Kaziranga in the late nineteenth century wrote about how inaccessible these tracts were.[64]

While there was limited control over the European sport, the native hunting practices were identified as based on cruelty. The Indian Forest Act, 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, 1891 retained the basic thrust of the 1878 Act in matters of wild animals. The Act of 1879 soon restricted the access to elephants. Throughout the British Empire there were other Acts that

were passed ostensibly to protect the game.[65] In 1889, the Assam chief commissioner prohibited hunting and shooting in the Reserved Forests from November to June, a fairly long period, without the permission of a range officer.[66] This initiative came not from the civil administration but from the Forest Department, and was not innovative either as such rules were already in practice in Lower Burma. The Wild Bird and Game Protection Act, 1887 and the Indian Fisheries Act, 1897 relating to were important pieces of legislations but most of these Acts remained a dead letter in Assam till the early twentieth century. The most important intervention came in 1912 when the department promulgated the Wild Birds and Animals Protection Act to regulate access to the wildlife.[67] 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 the game had probably forced the foresters to strictly implement the Act. Licences were issued to shoot wild animals with a primary purpose of protecting the crops. The number of such licences was 4,500 during 1917–18. Within a couple of years of its implementation, the department admitted that the Act suffered from many lacunae.[68] There was not sufficient staff in the department to look into the affairs of the Act. During flood, there was indiscriminate slaughter of animals, in particular the deer, with the aid of nets, guns, and spears in the areas of Nowgong, Darrang, and Sibsagar.[69] The Forest Department blamed the police and revenue officials for indiscriminate killings of the animals. Prohibition during some seasons of the year did not mean an end to killings of the animals. During 1917–18, six cases of killing deer during such prohibited season were taken to the court in Darrang. The conviction rate was abysmally low: in this case only one resulted in conviction and could realize a fine of Rs 15.

As there was increasing pressure by the colonial government to control access to wildlife, the colonial sportsmen looked for more privileges in matters of sport and hunting in specified tracts, which resulted in the formation of game associations. From the early twentieth century there is information that suggests the formation of game association in Assam. For instance, a game association was formed in Darrang in 1913 to coordinate with the Forest Department in matters of wildlife protection.[70] There is no conclusive evidence to suggest the social milieu of the members of the game association or the history of its formation but in all likelihood, the planters were the members of this association.

The association had only six members in 1916–17.[71] The basic purpose of these game associations, like their counterparts in the British Empire, was to regulate game as well as evolve 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.[72] After prolonged negotiations the association was granted the privileges of hunting, shooting, and fishing for ten years from 1 July 1915 in the 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 soon disappeared. Amongst the Europeans, a small section of the planters' community began to express concern about the preservation of the rich fauna of Assam. A number of colonial officials were also aware of the fact that there had been a concerted effort in several parts of British India, the forests of Central India in particular, to protect the game. Crimes involving the fauna also increased after the game regulations were introduced.[73] The number of such offences, with the strict imposition of forest rules and regulations, increased manifold. A few decades later the idea of crime was generally transformed into the notion of poaching.

Some Assamese also took active interest in wildlife conservation; they wrote eloquently on hunting and conservation. In the everyday practices too, a number of tribes showed respect to the wild animals despite there being no cause for their conservation as understood in the contemporary language of conservation.[74] The number of people who practised professional hunting was marginal, only for a few it was part of their leisure. The significant association was with the elephant, involving their capturing, ownership, and domestication. Trade in elephant was both in live elephant and in ivory, and this has been discussed below. This resulted both in social wealth and economic profit. Those who became rich by the elephant trade came to be socially known as *hati-dhani*. Such acquired social prestige was inherited by the next generations. It is difficult to estimate the wealth they had earned through this process but that its impact was surely of the highest level could not be minimized.

It was only through the legislative affairs and the space created by the newspaper that the Assamese could express their opinion for conservation of wildlife. Though the experiment of game reserve was yet to emerge as an aspect of wildlife habitat, there was considerable expression of concern about the deteriorating condition of the wildlife amongst a few

leading Assamese intellectuals early in the twentieth century. Though their number was limited, at least those who spoke and spelled out the wisdom of the preservation of protection had considerable influence in the local society. The most significant piece of contribution came from one of the leading intellectuals Pitambaor Dev Goswami (1885–1962). As a *satradhikar* (religious head of the Vaishnavite monastery), Goswami not only had a strong presence among the peasants and Assamese middle class, but he used to draw attention also from the government. His concern for wild animals was more utilitarian than religious. In a rather well-thought out essay, Goswami expressed concern about the decreasing number of wild buffalos which he categorized as Assamese buffalo and had precious social value amongst several communities.[75] He considered them as strong and with great milking capacity. In his essay he recounted the tragedy through which these buffalos had to pass through despite repeated attempts to draw the attention of the government. He spelt out clear policies for preserving these buffalos and also showed the availability of the forested areas that could be safely used for the preservation of these animals. Goswami was categorical in spelling out the necessity of wild buffalo conservation and indicated that they could provide a remedy to the growing demand for milk. He also did not shy away from appreciating the physical beauty of the animals.

PRESERVING THE WILD: CONSERVATION IN KAZIRANGA

The Colonial sportsmen took keen interest in the rhinoceros. Pollock, writing in the late nineteenth century, saw only two varieties of rhino in Assam.[76] 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.[77] The same specimen was found in the early twentieth century at different places.

The game reserves and sanctuaries were the products of the early twentieth century colonial understanding of the Indian fauna and the international fauna preservation movement. By the early twentieth century the threat of rhino poaching had reached a frightening level. There was rampant killing of the rhino and it attracted the attention of the public too. In 1903, *Times of Assam* published a letter that decried the extensive killing of animals. The writer lamented the rampant way in which the local Mikirs had taken to the profession of killing. 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 all the game in the province. It was found that by this time the rhino had completely disappeared from North Lakhimpur, a fact mentioned in official records.

With the threat to the rhino becoming apparent such concern for game acquired a new dimension. One of the earliest official manifestations of such destruction of game became apparent when the Zoological Garden in Calcutta requested the Assam government to supply it with matured rhino. The Zoological Garden, established in 1875 and one of Asia's oldest one, had by then became a centre of collection of various animal species in British India. Their effort to collect animals from across the country often resulted in dismal condition of the animals. Illustrative of such rarity was the case of the lions in the present Gir National Park when it was found that the animal was now only confined to a handful of locations from that of previously wider territories.[78] One-horned rhino also began to draw attention. Reports about its rarity was published in *Nature*, the leading journal of science. Despite prospects of good revenue from the supply of rhino, the Assam government expressed its inability to comply with the request. A preliminary enquiry revealed the existing condition of the rhino population, which was far worse compared to the measures adopted in other parts of British India to protect the game. Describing the condition of the fauna in general and the rhino in particular the Officiating Commissioner of Assam valley J.C. Arbuthnott, in a letter to B. Fuller, the Chief Commissioner of the province, in 1902, argued 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'. He emphatically pointed out that in the last couple of years the killing of the animal had been accelerated and the game had almost disappeared from various forests. Explaining the reason for killing, he also argued that the hunters from Bengal 'who included of novices' fired 'at anything that got up in front of them'. He claimed that in the case of the rhino the slaughter of females and immature animals had brought the species on the verge of extinction.[79] 'I am convinced that, unless an order of the kind is issued, the complete extinction of a comparatively harmless and most interesting creature is only a question of a very short space of time'. That the Assam Forest Department was hardly aware of such a condition of the animal also became apparently clear. Arbuthnott suggested that there should be some form of restriction on the killing of

the animal. He claimed, 'An order prohibiting or limiting the destruction of rhinoceros without special permission would, I feel sure, be welcomed by all true lovers of sport and natural history'.[80]

The Assam Forest Department had very little means to protect its fauna.[81] Whatever sporting rules did exist in the Assam Forest Manual, the Assam administration had no doubt that it was only a 'dead letter'. The rampant killing of the rhino attracted the attention of the public too. There was already a public concern about the protection of rhinos in Kaziranga.[82] Several Assamese, and also British officials, in Sibsagar expressed their dissatisfaction at the deplorable condition of the game in the forests of Kaziranga.

The rhino, unlike the elephant, however, was a species that was neither relegated to the backseat nor ardently sought after by the pre-colonial state. The earliest mention of rhino in regional religious texts can be found in *Kalika-purana* where sacrifice of the rhinoceros that was in practice in Kamakhya temple had been described.[83] Rarely associated with domestic practices it used to live in grassy land. As the latter worked as cultivable agricultural land, the threat to its habitat was under constant pressure. However, the comparatively low pressure of agrarian expansion and the conflicts with its habitat never acquired a serious magnitude. The early nineteenth century accounts of rhino describing it as living in the 'most densest and retired parts of the country' also mentioned the use of rhino horn for medicinal uses. By the early decades of the nineteenth century, Assam became known for its rhino horn along with bees, wax, and the like as key forest produces.[84] A few others also noticed the domestication of the rhino.[85] Another nineteenth-century record also mentioned private ownership of rhino.[86] M'Cosh, also mentioned the export of the young calves to Europe. By the early twentieth century, the entry of mercantile capital into rhino horn trade became well known.[87] The gradual expansion of the agrarian frontier in the unclassed forested zone, characterized by grassland, also worked as a new deterrent to the animal's habitat.[88] An animal, found in scattered places and often killed for its horn trade, gradually came to be identified as rarity.[89] An estimate taken in 1912 in Kaziranga indicated the number of one-horned rhinos at 100.[90] The possible extinction of some animals, like the American Bison, had already drawn the attention of wildlife conservationist.[91]

While the administration began to highlight the rarity of rhino, a few months later, Fuller admitted that though it was desirable to ban the killing of the rhino the sanction of the legislative council was most

necessary. An Act aimed at regulation and prohibition of shooting was yet to come in the province. Given the interests and pressure of those interested in the game, Fuller rightly appreciated that such a legislative intervention would undoubtedly come.[92] Another alternative for the government was to consider the formation of an 'asylum' to protect the rhino. Such an asylum could be formed by 'taking up as Reserved Forest a sufficient area of suitable land' as habitats. Fuller also suggested that a larger forest tract could be considered for the rhinos or other such game. Demarcation of tracts for game was not to interfere with the existing agricultural practices and the government decided to allow expansion of agriculture into the unclassed forests to accommodate new demands. Fuller made it clear that the department should not spend much public money on such an undertaking and the department would not afforest land that was suitable for cultivation.[93]

For Arbuthnott, the idea of an asylum appeared as more than agreeable. Support from several deputy commissioners came in handy.[94] A. Playfair, 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. An apprehension about the effectiveness of such asylums in Goalpara, usually identified as easy access for the Bengal hunters, still remained. To overcome such 'unsportsmanlike practice of indiscriminate shooting to swell the bag', Arbuthnot still thought only prohibitions could work. This resulted in selection of several tracts that could be reserved as special protected areas for the rhino. Certain tracts in North-Kamrup, Kaziranga—a tract lying in both the districts of Sibsagar and Nowgaon—and Laokhowa in the district of Nowgaon were identified for this purpose. These tracts were mostly located in the unclassed forests covered with reed and grass. The primary characteristics of flora in Kaziranga was the dense and tall elephant grass intermixed by small swamplands supported by annual flood caused by the river Brahmaputra. This ecology also meant the presence of a wide variety of animals. The river Brahmaputra as the main artery running across the province crossed the forests, this also worked as a catalyst for travellers to aim their gun at the games. And closeness to a large tract which became suitable for jute cultivation posed a serious challenge the long-term survival of the forested tracts of Laokhowa. In fact, by the end of the twentieth century, a substantial part of the reserve came to be reclaimed as agricultural land. Despite a proposal for such game reserve forthcoming, the government made its intention clear that it could not afford to expend 'public money on the undertaking'.[95]

This changing ground reality also coincided with a shift in the imperial concern towards fauna. Lord Curzon, the Indian viceroy, had in the meantime written to the Burma Game Association about the general extinction of rhino.[96] Curzon also talked about, in another context, about the 'progressive diminution' of wildlife in India, caused by petty trade and impoverishment of firearms.[97] Finally, in December 1904, Fuller instructed E.S. Carr, the Conservator of Assam, to submit a proposal notifying game reserves. In accordance with the rules that were in force in the Central Province a set of rules were framed to regulate shooting and hunting in January 1905. In June, Carr submitted a proposal for the formation of a game reserve in Kaziranga along with Laokhowa and North-Kamrup forests. As consideration of an asylum for the rhino gave way to the formation of game reserves, this led to elaborate enquiry into the existing agricultural practices and customary rights. Issues of additional manpower and expenditure also needed to be addressed. In the meanwhile, since 16 March 1905 shooting rules came into force. Hunting, shooting, trapping, and fishing within a game Reserved Forest was absolutely prohibited. Complete prohibition of hunting came in the case of female rhinoceros and buffalo, accompanied by their young calves; hunting of female bison and green pigeon was also prohibited. Some animals came under the seasonal protection. Hunters were required to obtain permits, after paying a fixed rate, to hunt. Rates for permits varied according to their nationality: an Assamese was to pay Rs 30 while a non-Assamese was to pay Rs 50.

Official reports are silent about what happened in the subsequent days. New areas were added to Kaziranga. Measures were taken to protect existing natural boundaries. The challenge came from the northern boundary of the sanctuary which ran parallel to the river Brahmaputra.[98] Officials began to express their apprehension about the survival of wild animals in a forested land often chosen by the grazers to herd their animals.[99] P.R.T. Gurdon, the Assam valley commissioner, however, thought that the success of the game reserve depended mostly on the hard work to be done by the lone game-keeper appointed for the reserve. Thus he thought '...if he did his duty, it should not be possible for Mikir shikars to poach in the reserve...the Conservator of Forests should be directed to insist on the game-keeper keeping a proper look out and reporting all trespassers'.[100]

While the government began to assert an exclusionist policy as a means of protecting the fauna the peasants began to protest. In 1924, a large number of peasants from the neighbourhood of the sanctuary, through a petition signed by several hundred peasants, strongly protested against the very idea of the creation of a reserve exclusively meant for animals and demanded that they be allowed land for cultivation. They argued that this had emerged as a major threat to their agricultural practices.[101] The conservator was willing to create some space within the outer periphery of the sanctuary but the subject never got any further attention within the bureaucracy. As the Forest Department tried to expand the existing territorial boundary of the reserve, there must have been some enthusiasm amongst the officials. Hunting, in the form of game, continued to be practised inside the reserve. The game reserve was renamed as game sanctuary in 1916. A semantic shift gradually helped to dissociate the ethical and bureaucratic foundation of the game reserve from that of the forestry programme which looked at the forest economy as a source of revenue. Since then a few foresters' pro-animal focus within the general framework of the forestry programme's ideological paradigm came to have significant bearing on wildlife management. The beginning perhaps is located in the intensive elephant management programme that evolved with A.J. Milroy, who shifted his bureaucratic focus towards the evolution of a more humanitarian elephant catching programme. In doing this, Milroy faced strong opposition from within the department.[102]

With the introduction of a privileged and hierarchical system of hunting rights, now mostly confined to a limited few, and animals like rhino coming under complete protection, the traditional hunting practices in Kaziranga came under serious scrutiny. Regulation of hunting required surveillance by a few staff from the Forest Department. In the early days, with a meagre fund being allotted, the management of game reserves had increasingly become a difficult task. Not only this, those who were specially entrusted to regulate the game did not have any expertise in knowing the hunters' social networks. That unauthorized hunting was going on was not unknown to the keepers of fauna. This gradually brought the idea of poaching in the official discourse of the department. The areas were regularly patrolled against poaching without bringing in additional infrastructural support. Such vigilance often met with armed resistance, and threat to the lives of the forest guards became obvious.[103] As the department admitted the increase in the destruction of

the game the vernacular press also exerted enormous pressure.[104] Publicly, the department came to express its desire to protect the flora and fauna of the region. The social pressure created by the press about the game came to play a vital role in the policy formulations of the department towards wildlife. Despite such challenges, the department, decades later, could conclude that the stock of wild animals had 'definitely increased'.

The nature of ecology in Kaziranga was self-sufficient enough to create other problems since its early days, which became a serious threat to the conservation programme of the fauna in the mid-twentieth century. The ecological setting of the game reserve was generally associated with reed and grass coverage. Such an ecology offered favourable ground for both grazing and production of winter crops. The practice of grazing by professional grazers in unclassed forests adjacent to the game sanctuary was reported since the early twentieth century. Scattered peasant cultivation was a prevalent practice. As already mentioned, the game reserve, since its early days of formation, was added with new territories at the cost of existing agricultural practices. Such restriction on agrarian activity remained a temporary strategy as the pressure from the peasants never disappeared. The new agrarian frontier had reduced the area for grazing of these animals. Also the area officially earmarked for grazing got squeezed with the coming of the game reserve. The Forest Department was strongly against any settlement with the neighbouring grazers whom the department regarded as unwelcome. Within a decade officials were almost unanimous that these grazers were mere 'inveterate poachers' and 'their proximity to a game sanctuary is most undesirable'.[105]

Since the establishment of the Kaziranga Wildlife Sanctuary it essentially remained a place for game and recreation for a limited few. After Independence the attitude towards the wildlife sanctuaries has changed.[106] Concern for wildlife came to occupy an important position in various public debates. Systematic arrangement was introduced to 'watch' the wild animals. It afforded the natives to appreciate their wildlife and help in the growing concern for the preservation of the wildlife. In March 1949 the Assam government invited India's renowned wildlife conservationist and ornithologist Salim Ali and the American ornithologist Dillon-Ripley to enquire into the condition of wildlife of Assam and make recommendations for the improvement of sanctuaries.[107] They were accompanied by people like E.P. Gee and C.G. Baron in acquainting them about the condition of wildlife in Assam. Ali and Ripley visited 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 wildlife in the Kaziranga. Their visit gave legitimacy to the Kaziranga as a site for wildlife habitat, at least from the perspective of the ornithology. This was also 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 brake that it had put on the raised number of rhino population in Assam. Their estimate was drastically opposite of the already believed number of rhino population in Assam. For example, prior to the visit of Ali and Ripley, various official estimates about the rhino population in the Manas sanctuary were somewhere between 40 and 150 while Ali and Ripley put the number at a maximum nine. Both of them found only two tracks during their six days of stay in that game sanctuary. For a couple of decades, the objective of establishing the game sanctuaries seemed to be a success in spite of the many hurdles it faced. The wildlife protectors believed that the numbers of wild animals had increased in some cases.

In 1950, the game sanctuaries were again given a new terminology—they were to be renamed as Wild Life Sanctuary. The official reason behind the change was that the word 'game' referred to those animals and birds that were shot for trophies and for meat whereas the term 'wildlife' embraced all living creatures, and implied their conservation. To give protection of wildlife more legitimacy a State Wildlife Board was formed in 1953, a year after the Indian Board of Wildlife was set up at the national level, with people like Satradhikar Goswami of Garmur, Prabhat Chandra Barua, and E.P. Gee as its members.[108] Their selection was based on their interest in the preservation of wildlife and also their public standing. But the board turned out to be an ineffective one, since its formation it met only once in 1958.

Revenue generated by the sale of rhino was nominal. In 1949, the Assam Forest Department sold one rhino to Cairo Zoo for Rs 20,000. Such sporadic sale continued and was welcomed by the Forest Department. The one-horned rhino became a state emblem in 1948.[109] Official acceptance of rhino as the state symbol of Assam gave further political credibility to the cause of the rhino. However, the rhino continued to face severe threat for its horn. The situation had deteriorated in the post-Independence period. In 1954, writing to J.L. Nehru, the Prime Minister whose appreciation of wild animals had enduring impact on the history of Indian wildlife conservation, the Chief Minister of Assam Bishnu Ram Medhi admitted that the rhino was on the verge of being extinct in Assam.[110] Shortly afterwards in December 1954, the Assam government introduced the Assam Rhinoceros Preservation Bill to protect the rhino from being killed, captured, and injured.[111] The bill aimed at controlling its destruction outside the Reserved Forest, the leased land in particular. It came under harsh attack from its members. Questions were raised about its unproductive nature of the rhino and its low birth rate.[112] Members across their party affiliation argued that the animal needed to be protected, considering the animal's importance as 'state heritage', its ability to generate money, and pressure on its habitat.

In the meanwhile, the Indian Board for Wildlife also put pressure to protect the animal in the earnest. Since 1963, the Indian Board for Wildlife took up the matter of wildlife seriously. During this time, the board had acquired a new dimension in managing the wildlife sanctuaries. It stressed the need for more numbers of such sanctuaries and prohibition of grazing within these areas. The board had taken another important initiative of not allowing socially privileged groups variously identified as 'foreign dignitaries' or 'VIPs' to shoot inside the parks. This was a rather significant directive to spearhead the cause of preservation of wildlife. There was a continuous pressure to allow the Department of Tourism to manage tourists inside these sanctuaries. With the cooperation of professional wildlife conservationists it was now realized that the 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 not be evaded any more and hence the programme of the national parks. It was felt within the Forest Department that the two wildlife sanctuaries should be converted into a national park. Growing pressure of international wildlife experts to inspect the claims of success of this sanctuary led the sanctuary to be opened for further inspection.[113] The situation changed in 1967 when a larger international survey was undertaken in India as part of a Smithsonian project to assess various wildlife habitats. A census by Juan Spillet, undertaken at the initiative of E.P. Gee, a significant initiative in terms of assessing the bio-diversity of Indian wildlife habitats, brought out the continuous pressure on the fauna by various pressures in Kaziranga.[114] Spillet's survey made it clear that enough destruction was done to various nationally recognized wildlife habitats, which required immediate intervention.[115]

ELEPHANT: HUNTING AND PRESERVATION

Within the history of the wildlife of Assam the elephant occupied an important place both in the rhetoric of fauna preservation as well as in generating revenue.[116] The extensive local knowledge and expertise in matters of elephant hunting and preservation came in handy in the nineteenth century. These experiences contributed significantly to the making of the colonial notion of the Indian elephant. This section broadly outlines this complex foundation of the colonial understanding of elephant.

Elephant continued to play a key role in the pre-British era. It 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 Assamese buranjis. Parallel to this, the handicraft industry, specializing in ivory, also flourished in the region.[117] The pre-colonial knowledge of the elephant came from local practices, understanding, and observation. Apparently such knowledge had two utilitarian perspectives: one was for the protection of the paddy fields and the other one was for their capture, management, and domestication. All this had passed into the oral as well as written tradition. Large corpuses of folklores, from western Assam, are proof of the extensive transmission and use of local knowledge.[118] The *Hastibidyanarba*, an ornamented manuscript prepared under the auspices of the Ahom kings, exemplifies the extensive knowledge of the Assamese on the health and well-being of the elephant.[119] The manuscript, now available in print form,[120] meticulously describes the several methods of elephant keeping, its breeding, and domestication.[121] The manuscript hints at how no one in particular was the chief patron of the elephants. Patronization was to be supported both by wealth and social sanctity. Trade in elephant allowed individuals to gain both economic and social capital. These classes of people came to be known as hati-dhani in Assamese vocabulary.[122] Amongst the chief agents of elephant management and capturing in Assam were the religious heads, the *gossains* or vaishnavite priests. They were also the chief owners of the hunted elephants. Many of them lived on the profits earned from elephant trade. The social practice of elephant hunting by the religious heads continued even in the post-Independence period.

The elephant came to play an important role with the beginning of the colonial rule. They came to be used for the transportation of the colonial administrators into remote areas. Elephants could be used in different seasons. It empowered and provided a newly acquired prestige to the very person who rode it, and turned out to be a symbol of social status. The elephant also had other utilitarian goals. First, since the beginning, the British officials were optimistic of the revenue potential of the elephant. Thus, way back in 1837, M'Cosh estimated that about 700–1,000 elephants were exported from Assam annually at an average price of Rs 300. M'Cosh further mentioned that these elephants were captured by the private suppliers and were mostly bought by the Bengal Commissariat Department. With the elephant beginning to contribute to the revenue of the government the Revenue and Agriculture Department dealt with its management. These revenue proceeds were categorized as a minor forest produce. During 1875–80 the total revenue derived from sale of *mahals* in Assam was estimated at Rs 123, 766.[123] Second, the elephant contributed to the strategic needs of the colonial empire, which significantly 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 the local inhabitants from the havoc caused to their lives and property. Simultaneously, there was growing awareness that it was necessary to protect the wildlife from other forms of threats, such as indiscriminate shooting. What came to be adopted was a policy of protection with a utilitarian thrust that was advocated by G.P. Sanderson, the superintendent of Kheda in Dacca since its establishment and who later on became a renowned authority on the elephant, and who came to dominate the elephant catching and management of the colonial world. Sanderson ardently espoused that 'protection and utilization should go hand in hand'.[124] Ideas about the exigency of State intervention in elephant hunting thus arose alongside the perceived necessity to extend protection to the life and property of the local inhabitants.

Despite its presence in various localities of India the craft of elephant-catching operation was practically available only in parts of Chittagong, and the sub-Himalayan forests, that included Assam and Bhutan.[125] Several tribes, spreading over the northern and eastern hills of the state, developed specialised practice of elephant capturing. This practice came to be utilized by the medieval polity. Sanderson mentioned that amongst the principal sites of elephant procurement in India, Assam was the major

source of supply along with hill Tipperah.[126] As domestic catching failed to meet the local needs, import of elephants from Burma and Ceylon helped overcome the crisis.[127] Since the mid-nineteenth century Assam became the most important area contributing to the colonial needs for elephants.

By the mid-nineteenth century the colonial state began to assert its monopoly of right in elephant catching and trade. The question of government monopoly in elephant catching was first raised in 1851 when it was pointed out that both 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 methods of elephant catching a State monopoly.[128] To assert the government's right over the elephant, it prevented the Jaintia Raja and others from hunting in Assam. Such debates over the ownership of the elephant continued for another two decades. The only regulation, however, whereby the Assam government claimed ownership of the elephants was 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 'elephant is in Assam a royal beast and can only be hunted under government license'.[129] This caused hardships to the peasants whose crops were regularly destroyed by the elephants in cultivated areas. Landlords who claimed a right to hunt elephants were also peeved at the loss of privilege and revenue. At the same time the costs of operating the monopoly led to the partial dismantling of monopoly right by 1859 in Assam. There was a lingering debate over the absolute property rights over the big animal. Sanderson emphasized the absoluteness of the right owned by the state. Such claims did not go unchallenged. The protracted legal battle fought by the zamindars of Mechpara and Bijni amply proved the hidden tension over the matter.[130] It was only after a long-drawn legal battle that the colonial state was empowered with the absolute right over elephant. Yet, in another instance, in 1872, the deputy commissioner of Sibsagar refused to recognize the rights of a tea-planter over a wild elephant. The case involved an incident when the manager of Attabarrie tea-estate had captured a wild elephant within its own grant. However, the deputy commissioner had claimed the elephant and sold it on the ground that 'all elephants are the property of Government'.[131] The tea-estate 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 was created, and ultimately it led to the intervention of the lieutenant governor, which necessitated the permission of the civil authorities to sanction such a right.

At least till 1872–3 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 of or killing of wild elephants in Assam without lawful authority.[132] Throughout the British administration there was disapproval of the wholesale killing of elephants. When forests were declared as Reserved Forest there was doubt whether it would be possible to hunt elephants in the Reserved Forests. However, in 1875, the government permitted hunting of elephants within the Reserved Forests but invested the deputy commissioners with a discretionary power to decide the viability of elephant hunting.[133] In 1879, the Elephant Preservation Act was enacted in India and soon extended to Assam. Hence onward, 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 of the elephant, there was much concern about the killing of the rogue elephants among the colonial administration. Henry Hopkinson needed to explain to the Revenue Board regarding the killing of one rogue elephant in 1873.[134] He defended a junior officer 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 'musth' elephant. The elephant was no more a property of the government, rather a liability. The incident is a key example of the growing control of the colonial state over the elephant and also wanting to bring to an end to the reckless killing of the animal.

While the subject of ownership gained attention, the question of elephant trade also became complex. Elephants were bought mainly 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 40–50 days of road march.[135] Buyers were mostly from the United Provinces and Bihar. Often, zamindars from Goalpara and Coochbihar

would also keep elephants in their private custody. A.J. Milroy, soon to become a good authority on the elephant in Assam, noted that these elephants were used for the entertainment of their children so that could play with them. Eventfully many children from these families grew up with these elephants.[136] Such practices disappeared only with the arrival of the motorcar. Another instance of employment of elephant in the private sphere was their deployment by the tea-planters who used them to carry tea-boxes. Away from such private needs the provincial government also bought elephants as transport for the officials.

With the progress of the administration of catching and management of the elephant, they were captured through either the *kheda* or government leasing out system. The responsibility of supervising the capturing and training elephant 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 (Fig. 6.3). Apart from the auction price a further sum of Rs 100 was imposed on each elephant captured as royalty.[137] Through a right of pre-emption the Assam government had retained the right to buy elephants over 6–7.5 feet in height at the fixed rate of Rs 600.[138] There were further rules which forbade the capturing of female elephants heavy with calf, and aged elephants had to be released.

The Kheda Department in Dacca was established in the early nineteenth century.[139] In its early days the department was operated by private contractors under a European officer to capture elephants required for the service of the commissariat department in Bengal. In the mid-nineteenth 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 the southern and north-eastern parts of the country. Around this time European management was introduced to lessen the fatalities. The establishment worked properly from 1866 and since then the area of Garo hills in Assam was identified as the best place for elephant hunting.

In the second half of the nineteenth century, the Government of India administered the elephant hunting through the Military Department. This ensured that the elephant capturing in Assam was a matter of privilege of this department only. During this period the Military

Fig. 6.3 Kheda operation formed a central component of forestry programme. Reproduced from *Annual Progress Report on Forest Administration of Assam*, Assam State Archive

Department used to receive supply of elephants from Assam. The provincial government required elephants mostly for the transport and they met this requirement by taking the elephants after paying the value fixed for them. All such elephants procured by the government were kept in an establishment, they were in use in Lakhimpur in eastern Assam for a short duration during the 1880s. A superintendent used to manage the establishment.[140] In the last quarter of the nineteenth century there was another proposal to establish an elephant depot in Sibsagar though it never became a reality.

However, what remained central to the history of elephant management was its method of capture. Two methods were employed to capture the elephant. In the first method, the elephant was captured, mostly allowed only during October and March, by erecting kheda or stockades round *pung* (waterbodies) 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 time. These stockades, which required the labour of some 20-5 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 5-6 weeks, these men would wait patiently for the advent of a herd to feed at the lick. This wait might sometimes exceed to two to 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 herd had time to recover from its alarm it would find itself inside the stockades and lost to the jungles forever.[141] Kheda required a primary outlay of from Rs 8, 000 to Rs 10, 000 and the lessee was required to have in possession a large number of elephants to tame the wild elephants so that they could be used for various types of work. Sanderson admitted that such a huge investment was practicable only for the government and native princes. On the other hand, in the mela shikar (Fig. 6.4), 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 it and tied it up in the jungle and then proceeded

Fig. 6.3 Many viewed Kheda operation as inhuman and it gradually came to be replaced by Mela Sikar. Reproduced from *Annual Progress Report on Forest Administration of Assam*, Assam State Archive

to catch one or two more. This system turned out to be popular due to the low capital investment.

Though there were fixed regulations for capturing the elephants in Assam, more rigorous than in any other province, Sanderson admitted that all elephant hunting regulations were grossly violated. He mentioned an instance where an individual, not himself a hunter, with resources

at his disposal, purchased a lease for Rs 2,000 at a public auction. The sale of hunted elephant in each tract allowed speculation by a class of middlemen. Often the hunter and *mahaldar* were two different persons. Buying a mahal required huge capital, which was not always possible for the hunters. Sanderson admitted that most of the hunters had a poor economic background and could not invest resources. In eastern Assam, often good hunters came from the Miri community, which had a meagre income from agriculture. The mahaldars, coming from a rich social milieu, in turn leased out their rights to skilled hunters, and Sanderson admitted that in this process these middle strata earned a huge profit. The mahaldars often underquoted the number of animals that they had captured and this also gave them extra profit. Such profits did not subside even in the mid-twentieth century when private companies were formed to earn more from the elephant-catching operation.[142]

Extra care was taken to look after the everyday affairs of the elephants in the custody of the district administration. A district superintendent was there to supervise the affairs of the elephants. The district forest offices maintained a register of elephants captured in various types of *shikar*. In this register, the information on the name of the elephant, its size and health, and details of its owner were described in detail. On the other hand, 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 when the mahout's services were dispensed with due to the death of elephants.[143] Keeping elephants also incurred a cost to the state. During 1869–70, the total cost of keeping and maintaining five elephants was found to be approximately Rs 2, 214. The expenditure was for keeping *jammaddar*, mahout, grass-cutter, cost of medicine, and ration.

Elephants remained a cause of conflict amongst various branches of administration. While there was a pressing need of elephants for various types of works the elephants could not be procured by the district administration itself. The Kheda establishment decided about the respective share of each district. While in Goalpara it was possible to have elephants on hire from the houses of zamindars, the same was not true in Kamrup.[144] The elephant was a further cause of conflict between the Assamese privileged class and colonial authorities. Acrimony was common before the onset of any effective set of rules to supervise the elephant catching operations. For a long time the Forest Department articulated unsuccessfully to keep the right of the elephant capturing in its hand. The only time it had succeeded in having a voice in matters of elephant hunting was when it disallowed capturing elephants in the fire protected areas in the winter.

The revenue earned from the elephant mahals was credited to the Land Revenue administration. Between 1875 and 1900 approximately Rs 302, 836 was earned from elephant mahals.[145] Prices of elephant kept rising from the mid-nineteenth century till the early twentieth century. At the same time, the establishment of the railways in Assam facilitated the better transportation of the elephants beyond the province.[146] Traders from outside the province found it much easier to take the elephants away without causing any serious physical injury.

Elephant hunting got a fresh momentum in the second quarter of the twentieth century under the stewardship of A.J. Milroy.[147] He suggested modifications in the very form of elephant hunting. At this time it was widely feared that the stock of wild elephants had seriously depleted. Many feared that the local hunting practices were more than responsible for the unwanted depletion in the number of elephants. Thus it was suggested that the rotational practice should be adopted in the identification of the localities where elephants were supposed to be captured. Years back Sanderson had also echoed a similar concern over the wasteful method adopted by the native hunters. A small number of captured elephants fall prey to death every year (Fig. 6.5). However, there was a decline in the markets 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.[148] He also suggested that the growing influx of immigrant peasants had led to a decrease in the feeding areas of the elephant. The elephant owners found it extremely difficult to maintain them because of the scarcity of feeding areas and it had forced the local aspirants to move out of these businesses.

The two systems of elephant hunting continued till the early twentieth century when the Department of Kheda in Dacca was transferred to Burma. Soon the Assam administration was allowed to look after the elephant mahals and the leasing out system became the only way of supplying elephants.[149] But there was apprehension about the viability of the stockade system and the continuous depletion of elephants in Assam.[150] During 1903–18, an official estimate suggested that, the

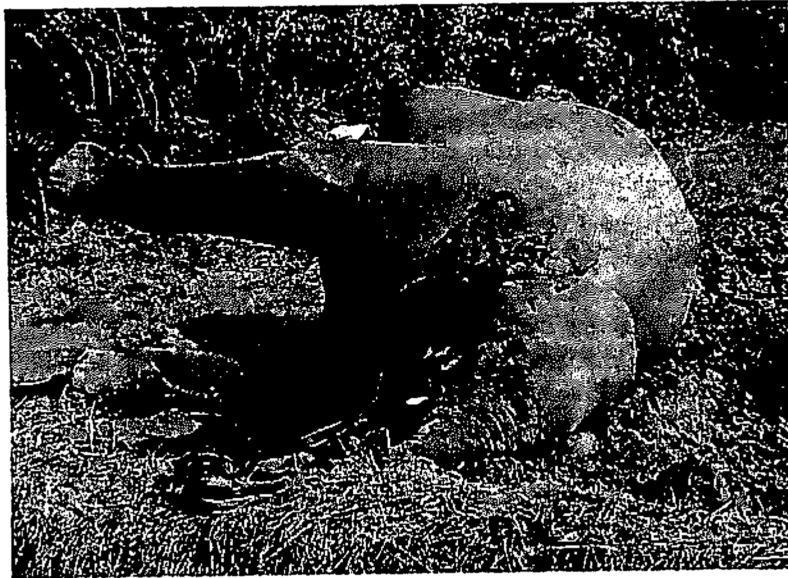

Fig. 6.5 Challenges to wildlife continue to haunt forest managers. *Courtesy* R. Soud

number of elephant caught under the leasing system was 5, 029. Till the first decade of the twentieth century the mahals were leased out for two years only and in the next two years hunting operation was prohibited. This was done with an idea to keep the process of regeneration of herds intact. However, 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'.[151] During 1917–18 a census was taken to estimate the numbers of elephants in various divisions. Though the estimate did not find favour with many forest officials, this conservative guess put the number of elephants around 3, 610.[152] Elephant capturing never receded and it forced the legislative council to discontinue the system of selling the elephant mahal since 1921. With the new system of arrangement of working the elephant mahal in place, the operations and management of these mahals were entrusted to persons with skill and bearing a sense of humanity.[153] A few years later the Assam Legislative Council made an attempt to ban all other types of elephant hunting except mela shikar. Exception was made to allow kheda shikar in the hill districts and frontier tracts where mela shikar was difficult.[154]

In spite of the attempt to regulate hunting, elephants continued to provide considerable revenue to the Forest Department. In 1941, the department further imposed limitation on the number of elephants to be captured in the kheda mahals. Both kheda and mela remained in practice concurrently till the post-Independence period but the number of elephants captured and mahals had declined since, leaving behind the experiences of traditional elephants caretakers to disappear gradually.

In Search of Paradigm: Foresters and the Naturalist

Wildlife had traversed a long path before attracting the late twentieth-century international fauna movement. During this interim period a few individuals remained stalwarts in carving out their space as conservationists. For instance, venison was sold in the open and was regarded as a delicacy. As mentioned earlier, with enforcement of new fauna preservation practices and with foresters like A.J. Milroy and P.D. Stracey at the helm of affairs, the wildlife management was placed in a new trajectory. There were a few foresters whose contribution into the history of wildlife protection in Assam is remembered by many. Milroy made efforts to turn the elephant hunting rules to an effective instrument, not only to protect them from human prey 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 also took measures to declare the rhino horn as a forest produce, which would prevent it from being traded according to the Assam Forest Regulation, 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 kind. To create the scope for observation he distinguished between bad and good hunting, and 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 twentieth-century wildlife history. P.D. Stracey, both a conservationist and shikari, and also a prolific writer on the problems of wildlife, took great care in taking out the problem of wildlife from the narrow confines of forestry. His writing in mid-twentieth century had already urged for the appropriate measures to save the 'vanishing rhinoceros'.[155]

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 at the University of Cambridge, began his career as a manager of a tea-plantation but soon diverted his attention to the rich wildlife potential of Assam. As early as 1933 he wrote about the species of hornbills found in Assam. The time then was also critical as the wildlife history of India was passing through the most delicate phase of its career. This period could be termed as a transformation from hunters-shooters to wildlife observers but in a reluctant manner. Rangarajan mentioned that Gee never was a big game hunter but ardently participated in another gentlemen sport of the time, namely angling.[156] Not only did he practise it but he was also an advocate of angling and argued about its non-harmful effects. He came to be 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 to advise the Indian government on wildlife matters, which first met in the year 1952. The expectation of the time was that nobody was fit enough to take charge of the wildlife until and unless one had shot dead a tiger. Gee came up with an alternative by the middle of the 1950s and asserted that no one should take charge of the forest division until he had caught fish with rod and line. He 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. These initial interests in wildlife and its conservation took him far beyond his professional career as a tea-planter in Assam. This took him far beyond his adopted homeland of Assam. He closely monitored the recovery of the rare swamp deer and the build up of rhino numbers in the Kaziranga game sanctuary. In Manas, he discovered a new species, namely the golden langur. His cooperative style won encomiums from the Indian Prime Minister Jawaharlal Nehru on his visit to Kaziranga, where Gee accompanied the prime minister on a tour. In his rare gesture to 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 the Indian State towards this aspects. The local foresters worked more closely at par with national bodies and groups in matters of wildlife protection. 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 believed that the most indiscriminate killing of Assam

wildlife took place during the time of the Second World War. While eastern Assam was converted into the theatre of warfare, moving military personnel, stationed throughout the length and breadth of the province, had caused enormous damages to the regional fauna. The governmental control over flora and fauna of the state had also temporally disappeared.

A number of Assamese professionals brought newer nuances into the wildlife conservation, as for example, the illustrious career of Robin Banerjee, a trained medical practitioner.[157] With the help of the twentieth-century technological innovation Banerjee gave the wildlife of Assam a larger canvass. He not only earned a living from the 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 movie. He was followed by a larger and wider young generation of wildlife protectionists.

At the close of the twentieth century the numerical strength of the third generation of the wildlife lovers went up manifold. The arrival of science was largely a temporary phenomenon. The larger scenario of wildlife as seen from the perspective of conservation practices had rather got entangled with the colonial forestry framework. This resulted not only in the dominance of the imperial forestry programme but also slowed down the arrival of science-based conservation due to bureaucratic procedures. The conservation programme largely centred on the paradigm of strict regulation of access into the territorial jurisdiction of wildlife habitats. In the meanwhile, away from this professional conservation practices, traditional values associated the care of wild animals also came to be catalogued and appreciated in a limited circle. Despite this, such practices and their efficacy remained a matter of doubt for the official wildlife managers.

Wildlife, Internationalism, and Contemporary Practices

> In no country life is valued in theory so much as in India, and many people would even hesitate to destroy the meanest or the most harmful of animals. But in practice we ignore the animal world.[158]
>
> Jawaharlal Nehru 1956

By the end of the twentieth century the management of wildlife came to be administered by a separate wing of the Forest Department, though deviating slowly from the forestry programme. Since the middle of the century, with the growth of an international fauna conservation

movement the department tried to impose strict surveillance.[159] The Indian political class became more sensitive to the issues of protection of wildlife.[160] Indian leaders began to show personal interest in the well being of the wild, which became part of the new governance. Jawaharlal Nehru's love for the wild is well known. The government initiated the wildlife week celebration, which, however, had limited success in creating awareness. At the same time, because of the concerted efforts of a few conservationists, wildlife protection became more effective. New laws were passed ostensibly to protect the wildlife which culminated in the passing of the Wildlife Protection Act, 1972. The Act, which declared several species as rare, further strengthened the position of the department.

The Assam government passed several orders in 1939, bringing some regulation in shooting. Most of the orders drew their inspiration from the Assam Forest Regulation of 1891. Immediately after the Independence, there was a larger concern for the preservation and protection of animals and birds at an all-India level. There were more restrictions on shooting and hunting of birds and animals in various unclassed State forests. The department made a conclusive case that amongst the animals, deer of all kinds, buffaloes, bison, and rhino, and amongst the birds, peacock, wood duck, and hornbills of all types needed immediate protection. In 1951, the Assam government 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 licences, which also became dearer. The new rule also introduced royalty at ad valorem rates on birds, animals, and reptiles captured alive and exported from the unclassed and Reserved Forest of the province.[161] This had not only strengthened the authority of the Forest Department but also moved towards the 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 created bitter debates within the political class. While regulations were sterngthened what went missing from this new regulatory regime was careful planning of restoration of ecosystem involving ecological scientists.

The fauna preservation movement came to be exemplified both in the rhino and tiger. The well being of the wild animals in Kaziranga even distracted the attention of the politicians in the 1970s, and it so happened that many a times questions were raised in the Assam legislative assembly about the growing killing of wild animals in Kaziranga. In March 1968, a bill was introduced in the Assam Legislative Assembly with a view of

preserving the rhino in Kaziranga as well as to attract wider international attention to it. This again brought back the concern raised by the legislators in 1954. At the national context specific concern for animals like tiger and lion was yet to take shape. The finer shape to an assertion of national concern came only in 1969 when Indian Prime Minister Indira Gandhi reaffirmed the government's position in the International Union for the Conservation of Nature (IUCN). Localized regional nationalistic undercurrents coalesced around the rhino before similar national level concerns crystallized around the tiger leading to the Project Tiger. The bill was sent to a select committee, chaired by Chief Minister 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, 1968 came into effect from 1969.[162] This also resulted in the submission of a proposal to declare the Kaziranga Game Sanctuary as a National Park in 1969. In January 1974, in pursuance of the Assam National Park Act, 1968, the Kaziranga Wildlife Sanctuary, distributed across an area of 430 square miles, was declared a National Park.[163] This resulted in getting in the Park more centralized fund and helped attract tourist attention. This was an important step towards the infusion of a more systematic attempt in drawing serious attention from the community of scientists, though it would hardly become an integral part of management of Kaziranga National Park, to strengthen the idea of making the Kaziranga National Park as a major site of wildlife habitat. Several decades of restriction in the close neighbourhood of Kaziranga could keep on agrarian practices at bay but such pressure was bound to bounce back years later.

Though the tiger hardly had any role in the political economy of Assam's imperial forestry, except hunting by colonial elites and zamindars,[164] outside the province, the tiger became a treasure house for the commercial safari operators in the twentieth century.[165] In the year 1968, it was estimated that about 50 commercial hunting parties spent over two million rupees as they set out into India's forests in hunt for the tiger. Several layers of the Indian society, namely princely houses, officials, and traders, were still engaged in the activities of tiger hunting. At the same time, the rapid expansion of the agrarian frontier, expedited by the use of chemical pesticides, decreased the habitable area for the tiger, forcing the latter either to seek offensive defence or go for extinction. 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 IUCN conference hosted by India in

1969 put the Indian tiger on the 'endangered' list.[166] The animal, already integrally connected with the Indian national emblem, found support in the Indian government.[167] Till now there was no upper limit as to the numbers to be killed by the hunters.[168] The move to protect wildlife was put on a better footing with the affirmative support coming from the Indian political class, [169] foresters, [170] and wildlife enthusiasts. Increasing international pressure and advocacy from global voluntary groups such as the World Wildlife Fund brought financial support towards the cause of the tigers, which came to be known as Project Tiger.[171] The Indian 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.[172] The tiger preservation movement began with a nationwide census based on identifying and counting tiger pugs in 1972, which gave a grim picture of an estimated 1,800 animals.[173] This 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 that were representatives 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 40 million-rupee scheme, was launched in April 1973, and in Assam, the Manas Wildlife Sanctuary was selected as the site for the project. Preparing the working plan for the Manas Tiger project, it again reinforced the imperial idea that the tiger habitat declined in this region mostly because of the expansion of cultivation and disappearance of deer.[174] The project also channelized more finance to an otherwise neglected sector within the forest management.

The relationship between forestry and wildlife has undergone structural changes in the last hundred years. This is particularly true in terms of the need of preservation of certain species. This change became apparent in the last quarter of the century. The logic of fauna preservation continues to be addressed not essentially from the perspective of eco-system but often political exigencies of the region. The best example is that of the rhino preservation movement centred around the Kaziranga National Park. At the end of the century, despite talks of restoration and management of ecosystem holding key to the fauna conservation as well as renewed understanding on the coexistence of specific wild animals with humans, an exclusionist policy, political exigencies, and other ideologies drawn from the imperial forestry programme still continued to be the primary driving force behind wildlife management.

Notes

1. W. Robinson, 1975 (1841, first print), *A Descriptive Account of Assam*, Delhi: Sanskaran Prakashak, p. 92.
2. For example, Lakhinath Bezbarua. 'Burhi Air Sadhu', in J.N. Goswami (ed.), 1988, *Lakhinath Bezbarua Rachanawali*, vol. 1, Guwahati: Sahitya Prakash.
3. Report on the Judicial and Revenue Administration of Assam, Jenkins, 1835, ASP no. 298, Bengal Government, General Department 1836, para. 200, (ASA).
4. James Matthie, who was the Principal Assistant Magistrate of Darrang, prepared the report.
5. W. Hunter, 1879, *A Statistical Report on Assam*, vol. I, Shillong: Government Press, p. 176.
6. Ibid., p. 25.
7. Ibid.
8. The following table indicates the frequency of elephant's visit to the villages in the district of Darrang. J. McSwiney, 1910, *Report on the Land Revenue Resettlement of Darrang, 1905–09*, Shillong: Government Press, para. 13.

Group	Ahin	Kati	Aghun	Pus	Total
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

9. C.S. Hart, 1915, *Note on a Tour of Inspection in Some of the Forests of Assam*, Simla: Government Press, para. 29.
10. S.N. Mackenjee, 1912, *Report on the Land Revenue Resettlement of Lakhimpur 1908-1912*, Shillong: Government Press, para. 19.
11. J.P. Hewett, Officiating Secretary to Government of India (GoI), in Resolution on Extract from the Proceedings of the Government of India, 20 September 1894, ASP no. 103, January, Home, APA Collection, BL.
12. Killing of snakes still did not attract the attention of the colonial state, the only exception being the district of Lakhimpur.
13. Thus, Hunter informs that during 1875 an estimated £287 and £172 were spent in the districts of Kamrup and Darrang, respectively. Hunter, *A Statistical Account of Assam*, pp. 25 and 176.
14. 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, nos. 151–2, Home, Public, July 1875 (NAI).
15. Note by Captain Rogers, August 1869, NAI, no. 56, Home, Public, September 1871 (NAI).
16. *Annual Report, 1938–39*, p. 19.

17. *Annual Report, 1948–49*, p. 22.

18. J. M'Cosh, 1837, *Topography of Assam*, Calcutta: Bengal Military Orphan Press, p. 44. M'Cosh gave a detailed description of the method of capturing the elephants.

19. Ibid., p. 45.

20. Ibid., p. 48.

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

22. Robinson, *A Descriptive Account of Assam*, p. 92.

23. W. Griffith, 2001 (first print, 1847), *Journals of Travels in Assam, Burma, Bhootan, Afghanistan and the Neighbouring Countries*, Delhi: Munshiram Manoharlal.

24. H.K. Barpujari (ed.), 1995, F. Jenkins, *Report on the North-East frontier of India: A Documentary Study*, Guwahati: Spectrum.

25. A.J.M. Mills, 1984 (first print, 1854), *Report on the Province of Assam*, Guwahati: Assam Publication Board.

26. Hunter in his *Statistical Account of Assam* provides graphic portrayal of wild animals in Assam. Allen in his *Gazetteer of Assam* also gives an account of the wild life in Assam.

27. John Butler, 1985, *Travels and Adventures in the Province of Assam during a Residence of Fourteen Years*, London: Smith Elder and Company, p. 218.

28. Baden Powell Bart, n.d., *Pig-Sticking or Hog Hunting, A Complete Account for Sportsmen and Others*, London. 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, is the oldest such club.

29. F.W.T. Pollock, 1900, *Wild Sports of Burma and Assam*, London: Hurst and Blackett, p. viii.

30. Bart, *Pig-Sticking or Hog Hunting*, p. 263.

31. Though there was no straightjacket stratification, the hunters in the early-twentieth century Assam can be categorized into two groups. One group practised hunting to earn a livelihood while the other group performed it for social status and other necessary social 'causes'.

32. J. Butler, *Travels and Adventures in the Province of Assam*, p. 215.

33. Mahesh Rangarajan, 2001, *India's Wildlife History: An Introduction*, Delhi: Permanent Black, p. 25.

34. P.D. Starcey quoted in Thapar, 2003, *Battling for Survivals: India's Wilderness Over Two Centuries*, New Delhi: Oxford University Press, p. 218.

35. Rangarajan, *India's Wildlife History*, p. 148.

36. Ibid.

37. E.P. Gee, 1962, 'The Management of India's National Parks and Wildlife Sanctuaries', part IV, *Journal of Bombay Natural History Society*, vol. 59, no. 2, p. 219.

38. See, Maharaja of Cooch Behar, 1946, 'Some Reminiscences of Sport in Assam', Part I and Part II, *Journal of Bombay Natural History Society*, vol. 45, no. 3, pp. 199–209, 321–24.

39. H.E. Shortt, 'Gauhati Crocodiles', Private papers, IOR, Mss. Eur.C.435, APA Collection, British Library.

40. Governors of Assam were always escorted by the zamindars of Goalpara during their hunting expedition inside the jungle. Maharaja of Cooch Behar, 1946, 'Some Reminiscences of Sport in Assam', vol. 45, part III, p. 487.

41. Pollok claimed that he and his friends never pretended 'to be learned naturalists' but they had 'been keen sportsmen and kept our eyes open, and have studied the manners and habits of the animals we have hunted, and we flatter ourselves that many points which we have noted have been ignored or overlooked in the best Natural Histories'. Pollock, *Wild Sports of Burma and Assam*, p. viii. The number of animals 'shot' and 'killed' varied from year to year. The Annual Forest Administration Report collected this information. In 1944–5 among all the animals killed there were 74 tigers, 53 wild elephants, 156 barking deers, and 58 spotted deers. See, *Annual Report, 1944–45*, para. 102.

42. T.R. Phukan, 1983, *Shikar Kahini*, Guwahati: Assam Publication Board.

43. For biographical details of Phukan and his hunting life see, L.N. Tamuli (compiled), 2003, *Tarun Ram Phukan Rachanavali*, Guwahati: Assam Publication Board.

44. P.L. Choudhury, 1988, *Shikar-Nihar*, Guwahati: Bani Prakash. Several others also left behind their accounts of hunting, See, L.S. Barua, 1974, *Shikar of Assam*, Guwahati.

45. The best illustrative example of their engagement with the game is, Maharaj of Cooch Behar, 1985 (first print 1908), *Big Game Shooting in Eastern and North Eastern India*, Delhi: Mittal.

46. Quoted in Valmik Thapar, 2003, *Battling for Survival: India's Wilderness over Two Centuries*, p. 218.

47. Members of the Gauripur Zamindari kept elaborate records of their *shikars*.

48. P. Bhattacharya, 1981, *Hatir Sange Panchas Basor*, Calcutta: Ananda. (Heramba Saikia, 2007, Assamese translation, Guwahati: Jyoti Prakash). The book, intended to be a personal memoir of Lalji, compiled by Bhattacharya, provides an account of Lalji's hunting expedition and also his knowledge of wildlife of this region.

49. For the best example of such hunting expeditions, see, D.K.L. Chaudhury, 2006, *A Trunk Full of Tales: Seventy Years with the Indian Elephant*, Delhi: Oxford University Press. The well-known Bengali writer Leela Majumdar's father, a surveyor in British Assam, had eloquently penned down his memories of pig hunting. See P.R. Rai, 1956, *Baner Khabor*, Calcutta. The author is thankful to Gautam Bhadra for providing him with this information.

50. M'Cosh, *Topography of Assam*, pp. 44–5.

51. P.D. Stracey, 1963, *Wildlife in India: Its Conservation and Control*, Bombay: Government of India.

52. J.T. Pearson, 1838, Assistant Surgeon, 'A Letter to Dr. Helfer: 'On the Zoology of Tenasserim and The Neighbouring Provinces', *Journal the Asiatic Society of Bengal*, vol. viii, pp. 357–67.

53. E. Blyth, 1851, 'Notice of a collection of Mammalia, Birds, and Repitles, procured at or near the station of Cherra Punji in the Khasi Hills, north of Sylhet', *Journal of Asiatic Society of Bengal*, no. 6, pp. 517–19.

54. J.D. Hooker, 1854, *Himalayan Journals, Notes of a Naturalist*, vol. II, p. 472.

55. W.J. Bart, 1833, *The Natural History: Mammalia.*, vol. I, Monkeys, London: Longman and Co., p. 101.

56. A detailed bibliography of works published on the birds of Assam in Anwaruddin Choudhury, 2000, *The Birds of Assam*, Guwahati: Gibbon Books and WWF.

57. He began with a report on the Bulbuls of North Cachar. See, E.C.S. Baker, 1892, 'The Bulbuls of North Cachar', *Journal of the Bombay Natural History Society*, vol. 7, no. 1, part I, pp. 1–12. Later he published another eighteen pieces on Assam birds.

58. E.C.S. Baker, 1913, 'Description of a New Subspecies of Warbler (*Acanthopneuste trochiloides harterti*) from Khasia hills', *Bulletin of British Ornithological Union*, vol. 31, no. 184, pp. 36–7; E.C.S. Baker, 1913, Exhibition of a Pair of Blood-pheasants (*Ithagenes cruentus kuseri)* from the Mishmi hills, with remarks and a description of the female hitherto unknown to science, *Bulletin British Ornithological Union*, vol. 33, no. 193, pp. 83–4.

59. Baker was followed by Hugh Whistler, from the Imperial Police Service, who significantly contributed to the study of birds in Assam. His book 'Popular Handbook of Indian Birds' contained numerous references to birds in Assam. Ornithology was given further popularity by people like A.M. Primrose, F.N. Betts, Walter Koelz, R.M. Parsons, and H. Stevens.

60. D.C. Milburne, 1933–45, 'Notes on Birds near Dhendai, Darrang', IOR, Mss. Eur. D 863, APA Collection, BL.

61. H.S. Nood, 1936, *Glimpses of the Wild: An Observer's Notes and Anecdotes on the Wild Life of Assam*, London: Witherby. He began by describing the behaviour of jackals found in Assam.

62. Selected notes, writings of A.J. Milroy, both published and unpublished, can be accessed in his collection of private papers. See, Private papers of A.J.W. Milroy, Mss, Eur. D1054, APA Collection, BL.

63. Stracey's observations on elephants are recorded in his Elephant Gold. See, P.D. Stracey, 1991 (first print 1963), *Elephant Gold*, London: Weidengel, p. 63.

64. E.P. Gee, 1964, *The Wild Life of India*, London: Collins, p. 219.

65. See Thapar, *Battling for Survival.*

66. F.C. Dukes, Secretary to the Chief Commissioner of Assam to the Deputy Commissioners, Shillong, 14 January 1889 in ASP, Revenue and Agriculture, January 1889.

67. Act VIII, 1912. *Annual Report, 1913–14*, para. 199.

68. *Annual Report, 1920–21*, para. 238.

69. Ibid. paras 238 and 47.

70. ASP no. 35–46, Revenue-A, February 1913 (ASA).

71. *Annual Report, 1916–17*, para. 221.

72. For details of the Nilgiri Game Association, see, E.P Stebbing, 1909, 'The Nilgiri Game and Fish Association', *Indian Forester*, vol. 35, 1909, pp. 121–2.

73. Ibid.

74. See, S. Chauduri, 2008, 'Folk Belief and Resource Conservation: Reflections from Arunachal Pradesh', *Indian Folklife*, serial no. 28, January, pp. 3–6.

75. P.D. Goswami, 1939, 'Banaria Moh Rakhsar Guri Katha', *Abawahan*, vol. 26, no. 10, pp. 26–9.

76. F.T. Pollock, *Sports in British Burma, Assam, and the Cossyah and Jyntiah Hills*. 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 during 1860–1870.

77. P.D. Stracey, 1949, *Assam's Economy and Forests*, Shillong: Government Press, p. 470.

78. Divyabhanusinh, 2005, *The Story of Asia's Lions*, Mumbai: Marg Publications.

79. Letter from J.C. Arbuthnott, Commissioner of Assam Valley to the Secretary to the Chief Commissioner, Assam, 4 November 1902, ASP nos 75–134, Revenue-A, September 1905 (ASA). The name of Lady Curzon is commonly associated with the preservation of the rhino in Kaziranga though she did not play a central role in the story of Kaziranga.

80. In Bengal, the killing of the rhino was already prohibited.

81. 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 nos 75–134, Revenue-A, September 1905 (ASA).

82. Ibid. J. Donald, Deputy Commissioner of Sibsagar wrote to the Commissioner, Assam Valley that he had 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 reserved in order to prevent the extermination of the rhinoceros'.

83. 'The flesh of antelope and rhinoceros give my beloved (kali) for five hundred years'. Quoted in William J. Wilkins, 2001, *Hindu Mythology: Vedic and Puranic*, Boston: Adamant Media Corporation, p. 262. The *Kalika-Purana* composed in the tenth century in Assam is one of the 18 Upapuranas. The text has been critically commented upon by several authorities.

84. *The Monthly Review* from January–April 1839, vol. I.

85. *The Asiatic Journal and Monthly Register for British and Foreign India, China, and Australia*, 1836, Parbury: Allen and Co., May–Aug, p. 30. Also, M'Cosh, *Topography of Assam*, p. 46.

86. Anil Roy Chaudhuri, 2008, 'Rhinos', in *Sadin*, p. 10.

87. The entry of Marwari traders in the rhino trade has been mentioned in several Forest Department reports and has been discussed elsewhere in this chapter.

88. For a comprehensive understanding of the habitat of the one-horned

rhino see, W.A. Laurie, 1978, 'The Ecology of the greater one-horned rhinoceros', unpublished PhD thesis, University of Cambridge.

89. E. Dinerstein and G.F. Mccracken, 1990, 'Endangered Greater One-horned Rhinoceros Carry High Levels of Genetic Variation', *Conservation Biology*, vol. 4. no. 4, pp. 417–22.

90. Ibid.

91. The case of American Bison has been well-illustrated in M. Moulton, 1995, *Wildlife Issues in a Changing World*, 2nd edition, CRC Press.

92. Letter from Secretary to the Chief Commissioner of Assam to J.C. Arbuthnott, Deputy Commissioner, Sylhet, no. 2160 Misc, 9628G, Shillong, 18 December 1902, ASP nos 75–134, File no. Revenue-A, September 1905 (ASA).

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

94. P.R.T. Gurdon, the Deputy Commissioner of Kamrup, in fact argued that if such a reserve was to be formed the authority to issue shooting licenses be only invested with the deputy commissioners. Quoted in letter from J.C. Arbuthnott to the Secretary to the Chief Commissioner, Assam 28 August, 1903, Jowai, no. 77 in ASP 75–134, File no. Revenue-A, September 1905, nos 75–134 (ASA).

95. Secretary to the Chief Commissioner, Assam to Commissioner, Assam Valley, 15 March 1904, Shillong, no. 12 Forests-128R, no. 79 in ASP nos 75–134, File No. Revenue-A, September, 1905, (ASA).

96. Curzon wrote: 'The rhino is all but exterminated save in Assam'. Curzon's reply to Burma Game Preservation Association, 23 September 1901, Home Public Deposits, no. 15, August 1904, National Archives of India. Also see, G.N. Curzon, 1906, *Sir Lord Curzon in India: Being a Selection from His Speeches as Viceroy and Governor-General of India, 1898–1905*, London: Macmillan, pp. 435–40.

97. Quoted in W.M. Adams, 2004, *Against Extinction: The Story of Conservation*, London: Earthscan, p. 110. For understanding the changing perspective of British Raj, specially Lord Curzon, towards the wildlife, see, V.K. Saberwal, M. Rangarajan, and A. Kothari, 2001, *People, Parks, and Wildlife: Towards Coexistence*, Delhi: Orient Longman, pp. 17–23.

98. Note by J. Errol Gray, 1913 in *Extension of the Kaziranga Game Reserve*, ASP nos 37–57, Revenue-A.

99. A. Playfair, the Deputy Commissioner of Sibsagar, argued that 'it is a remarkable fine place for a grazing reserve such as has been discussed by the government on more than one occasion, but it is not, to my mind, an ideal one for wild animals, though certainly it might become so by the growth of jungle in the course of time.' A. Playfair, Proceedings in connection with the proposed addition to the Kaziranga Game Reserve, no. 186, 29 July 1915, in ASP nos 181–214, File No. Revenue-A, September 1917 (ASA).

100. Letter from P.R.T. Gurdon, Commissioner, Assam valley districts to Under-Secretary, Revenue Department, Chief Commissioner of Assam, no. 6510G, Gauhati, 3 October 1912 in *Extension of the Kaziranga Game Reserve*, ASP nos 37–57, Revenue-A, May 1914 (ASA).

101. Petition of villagers against game sanctuary, letter from Conservator of Assam to Second Secretary, Government of Assam, no. A-212, 6 December 1924, in Revenue-Forests, June 120–8, 1925.

102. The issue has been addressed by me later in this chapter.

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

104. *Annual Report, 1938–39*, p. 19.

105. Letter from W.F.L. Tottenham, Officiating Conservator of Forests, Eastern Circle to the Chief Secretary, Chief Commissioner, Assam, Rev, A, no. 181–214, 29 January 1916 (ASA).

106. Wild animals 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 Cat-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, Pig-289, Porcupine-116, Wild monkey-237, Ape-32, Squirrel-243, Jackal-25, Hare-10, Crocodile-2, Python-103, Turtle-422, Fruit Pigeon-280, Horn bill-8 were killed during this period.

107. *Annual Report, 1948–49*, para. 130. For the collective contribution of both Ali and Ripley in the conservation history of India see, Michael Lewis, 2004, *Inventing Global Ecology: Tracking the Biodiversity Ideal in India, 1945-1997*, Hyderabad: Orient Longman, pp. 29–69.

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

109. Since 1948 the public sector undertaking Assam State Transport Corporation used this emblem widely and thus helped the popularity of the symbol too. The author is thankful to Kumudeswar Hazarika for sharing this date.

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

111. The bill was introduced by the Forest Minister Ramnath Das, a Congress member. Though it was passed without any opposition some lighter form of opposition came from leading Communist Party of India (CPI) member Gaurishankar Bhattacharya. *The Assam Gazette*, part vi, 15 December 1954, no. 28.

112. Socialist leader, Hareswar Goswami and CPI leader Gaurishankar Bhattacharya was amongst those who expressed their doubt about the utilitarian objective of its preservation.

113. The most well-known case of such resistance from the Assam Forest Department was that of Thomas Foose from the University of Chicago who was denied permission to study the rhino in Kaziranga. Such denials arose mostly due to the apprehensive character of bureaucracy towards other international observations.

114. J.J Spillett, 1966, 'A report on wild life surveys in North India and

southern Nepal: The Kaziranga Wild Life Sanctuary, Assam', *Journal of the Bombay Natural History Society* vol. 63, pp. 494-533.

115. For understanding the global dynamics see, Lewis, *Inventing Global Ecology*. For Spillet survey, see 'A Report on Wildlife Surveys', pp. 233-5.

116. D.K. Lahiri-Choudhury, 1999, *The Great Indian Elepahnt Book: An Anthology of Elephants in the Raj*, New Delhi: Oxford University Press; R. Sukumar, 1989, *The Asian Elephant: Ecology and Management*, Cambridge: Cambridge University Press.

117. For a discussion on ivory craft in nineteenth century Assam, see, R. Saikia, 2000, *Economic and Social History of Assam*, Delhi: Manohar, pp. 53-8.

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

119. Written by Sukumar Borkath, with the help of illustrators Dilbar and Dosai who had done the illustrations for the manuscript in 1734 under the guidance of the Ahom king Siv Singha and his wife Ambika Devi, Hastibidyanarba describes in details the anatomy, behaviours, and methods of elephant management. See, S.K. Bhuyan, 'Hastibidyanarba Puthi', in J.N. Bhuyan (ed.), 2005, *Suryya Kumar Bhuyanar Bibidh Prabandha*, Guwahati: LBS, pp. 152-6. Similar medical treatise was also available on horses. See, H.C. Goswami (ed.), 1932, *Ghoranidan*, Guwahati: Government Press.

120. P.C. Choudhury (ed.), 1975, *Hastividyarnava*, Guwahati: Assam Publication Board.

121. Suryya Bhuyan, the Assamese historian, wrote that the Ahom state depended on the several neighbouring tribes on elephant keeping. It was from them that the Ahom kings selected and appointed elephant keepers known as mahut.

122. A list of such hati-dhanis are mentioned in B. Sarma, 1987, *Tukura Bahor Kuta*, Guwahati: Benudhar Sarma Smarak Nyas; p.288. Sarma also mentions songs that were used to capture elephants. Another Assamese drama portrays the methods and social life of the elephant catchers and their relationship with the elephant lease owners. See, M. Bhuyan, *Hati Aru Phandi*, Lakhimpur.

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

124. N. Nongbri, 2003, 'Elephant Catching in Late Nineteenth Century North-East India: Mechanisms of Control, Contestation and Local Resources', in *Economic and Political Weekly*, vol. 38, no. 30, p. 3192.

125. 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).

126. The number of elephants caught by lessees in Assam alone during 1877-80 is as follows: 1977-8: 172; 1978-9: 338; 1979-80: 122. Out of this 60 either died or were released. The supply of Tipperah was on an average was 50 per annum. A large number of elephants were also annually imported into India from Burma and Siam. The Madras Commissariat department had been exclusively supplied by shipment from Burma for many years.

127. During 1863-76 India imported 1659 elephants 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).

128. Sivaramakrishnan, *Modern Forests*, p. 102.

129. 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).

130. Nongbri has discussed about the protected legal history in detail. See, Nongbri, 2003, 'Elephant Catching in Late Nineteenth Century North-East India.

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

132. From J.W. Edgar, Junior Secretary to Government of Bengal to the Secretary of Government of India in NAI, nos 63-4, RAC, Forests, December 1883 (NAI).

133. *Annual Report, 1875-76*, p. 79.

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

135. Letter of J. Errol Gray to W.F.L. Tottenham, 28 April 1917, ASP nos 107-133, Finance Department, Forest-A, July 1919 (ASA).

136. Report of A.J. Milroy, ASP nos 107-33, Finance Department, Forest-A, July 1919 (ASA).

137. 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).

138. 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).

139. In 1825-6 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.

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

141. Demi-official Letter of J.L. Errol Gray, 28 April 1917, ASP nos 107-33, Forest-A, 1919 (ASA).

142. The company entitled Kashikata Komarbari Elephant Catching Company, based in Bihpuria, and Tileswar Barua was its secretary, 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).

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

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

145. The figures are prepared from the Annual Land Revenue Administration Report for Assam during 1875–1900. These figures are for the Brahmaputra valley districts and include both license fees and royalty.

146. Letter of J. Errol Gray to W.F.L. Tottenham, 28 April 1917, ASP nos 107–33, Finance Department, Forest-A, July 1919 (ASA).

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

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

149. ASP nos 1–8, General Department, Military-A, June 1903 (ASA).

150. Letter of J. Errol Gray to W.F.L. Tottenham, 28 April 1917, ASP nos 107–33, Finance Department, Forest-A, July 1919 (ASA).

151. 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 nos 107–33, Finance Department, Forest-A, July 1919 (ASA).

152. Ibid.

153. Notes, ASP nos 54–73, Forest-B, September 1931 (ASA).

154. Ibid.

155. P. Stracey, 1949, 'The Vanishing Rhinoceros and Assam's Wildlife Sanctuaries', *Indian Forester*, November, p. 470.

156. Rangarajan, *India's Wildlife History*, p. 85.

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

158. J. Nehru, 1956, in *Why Preserve Wildlife?*, Leaflet no. 1, Delhi, Indian Board of Wildlife.

159. For details on the twentieth century international fauna preservation movement see, W.M. Adams, 2004, *Against Extinction: The Story of Conservation*.

160. Rangarajan, *India's Wildlife History*, pp. 108–23.

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

162. Act IX of 1969, see, *The Assam Gazette*, 4 September 1968.

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

164. The members of Gauripur and the Cooch-Behar royal family extensively hunted tigers in western Assam.

165. Rangarajan, *India's Wildlife History*, p. 95.

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

167. For an interesting account of tiger in Indian history, see, Valmik Thapar, 2002, *The Cult of Tiger*, New Delhi: Oxford University Press.

168. Ban on tiger shooting was imposed in July 1970.

169. Rangarajan had discussed the role played by Indira Gandhi as a young prime minister in saving the tiger. She was associated with the Delhi Bird Watchers Society, had travelled to a Kenyan wildlife reserve, and had close connection with the new generation of wildlife lovers within the ranks of bureaucracy. M. Rangarajan, *India's Wildlife History*, p. 95. Mahesh Rangarajan, 2009, 'Striving for a Balance: Nature, Power, Science and India's Indira Gandhi', *Conservation and Society*, vol. 7, no. 4, pp. 299–312.

170. Prominent among them was M.K. Ranjitsinh and Kailash Sankhala. The latter was critic of shikar and commercial forestry and presented a paper entitled 'The vanishing Indian Tiger' in the International Union for Conservation of Nature (IUCN) conference of 1969. He played a key role in drafting the Wildlife (Protection) Act, 1972.

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

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

173. A census taken in 1969 had a figure of 2,500.

174. Chief Conservator of Forest, 1973, *A Management Plan for Manas Tiger Reserve and Orang Charduar Area 1973–74 to 1978–79*, Shillong: Government of Assam.

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——, 2009, 'The Kaziranga National Park: Dynamics of Social and Political History', *Conservation and Society*, vol. 7, no. 2, pp. 113–29.
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