

## Human Inflicted Injuries in the Wild Elephants of Assam: Retrospection by an Elephant Veterinarian

Kushal Konwar Sarma

*College of Veterinary Science, Assam, India*

### Introduction

Out of the thirteen range countries of the Asian elephants (*Elephas maximus*), India occupies an important position because of its serious official endeavor, as well as people's participation, in the attempt to conserve this important mega-herbivorous species. Assam, the North-eastern state of India, with its thick evergreen forests, green hills and abundant natural sources of water is considered one of the last bastions of the Asian elephant. Large herds of wild elephants once roamed in the forests of the region and, till the middle of the last century, the region was abode to thousands of wild elephants. Clearing large tracts of elephant habitat for tea estates, resettlement of farmers displaced by flood and erosion of the mighty Brahmaputra and tributaries, land conversion by politically motivated transmigration of farmers from within and outside the state as well as the neighboring foreign countries, have rapidly dwindled the centuries old virgin forests, and wild herds are becoming homeless in their own abode

The region is still home to a good number of Asian elephants. The last census recorded around 5500 wild and 2000 captive elephants. However, elephants in Assam are also dying due to electrocution, railway accidents, poisoning and firearm injuries. Elephants are killed for ivory and even for meat. The author wishes to record his tryst with several injured elephants in the region, which were the direct fallout of human-elephant conflict that is growing menacingly and threatens the very existence of the elephant population in this important elephant land.

### Injury cases

#### *Case #1*

An adult tusker was found shuffling painfully around the Behali Forest Range office in the early summer of 1996. He was suspected to have been shot by ivory hunters and was severely indisposed when spotted; numerous oozing lesions were thought to be caused by gun-shot wounds. The elephant died due to septicemia without giving any scope for treatment. There were twelve gun-shot wounds all over his body.

#### *Case #2*

Another huge bull (10.5 feet at the shoulder) was spotted limping in the Lower-Doigrung (Nambor) Reserve Forest under the Golaghat Forest Division during January 1997. He was seen in a badly degraded forest patch cleared illegally for tea plantations. Ironically, the forest tract was credited to be Asia's biggest reserve forest only a century ago where a record catch was bagged in a *Khedda* operation during the British rule. When the bull was visited, he was found to have developed a strange amity with the local populace, who also affectionately gave him a name, *Babu*. There were two huge abscesses on both of his buttocks, the right forelimb was not able to bear his body weight and was flexed and supported on the toe. On closer scrutiny, a hole was spotted on the medial side of the arm region from where purulent discharge was oozing. This caused severe pain and impeded his movements, leading people to believe that he was starving and they started to offer him soaked paddy and fruits. They would place the food in a woven bamboo container some 15-20 meters in front of him and he would reach the feed with short jumps

with the sound limb while dragging the injured limb. This practice continued for some ten days. On investigation, it was gathered that he was a part of a huge resident herd of the area and the injury must have been caused by farmers protecting their crops. He presented a reasonably good appearance in spite of the serious injuries that caused him so much misery. It was already late afternoon by the time we reached him and we had to leave him there for the day as the wild herd came closer.

He was spotted more than a kilometer away from the place he was left on the previous evening, and was darted on foot using 25 mg of Medetomidine and 300 mg of Ketamine in a single metal dart. He was completely immobile in 25 minutes with flaccid tail, trunk, penis and ears drooping forwards. After being satisfied about the safety of handling him, we placed two female\* *koonkies* on either flank and tied the hind legs with a long jute rope, used for tying newly captured elephants in Assam. (Female *koonkies* were used as male *koonkies* would not easily go closer to a huge wild bull.) Then we operated on the abscesses. More than two kilograms of pus was drained from each of the abscesses and long raw iron rods (25-30 cm in length, 3 cm in diameter, pointed at the tip) were recovered from each of the abscesses. After properly dressing the cavities, strong tincture of iodine was painted in the cavities and fly repellent ointment was applied.

It was a fearful experience to crouch between his front legs to examine and operate on the hole inside his arm. Inside the cavity, the tract was narrow and was probed but no foreign object could be located; probably another metal rod thrown by a farmer hit him there, but the bull may have removed it with his trunk. The opening was widened for better drainage, tincture of iodine was painted and the surgery finished with application of a fly repellent cream. A long acting antibiotic, NSAID, and Ivermectin was injected post operatively along with tetanus prophylaxis and then the hind legs were released from the loops. The reversal drug (Atipamezole) was injected and the *koonkies* were moved away. The animal made a quick recovery and, interestingly, came back from the

jungle around the same time every day to the spot where he was operated to devour the paddy and banana offered by the people in which antibiotic tablets were also concealed. After about a fortnight, he moved away with the herd.

### Case #3

A huge ageing tusker came out from the Panpur Reserve Forest and entered deep into the human settlements in the Sootea area of the Sonitpur district on the north bank of the Brahmaputra during the winter of 2000. It was presumed that probably another younger tusker assumed dominance in the area famous for its huge tuskers, as the attempt to drive him back did not work; he would return to the human settlements immediately. The lure of large areas of sugarcane cultivation may have added to his motivation to come back into the human settlement across the Ghiladhari River. He was reasonably harmless as no human life was lost to him but sugarcane ready for harvest suffered severe damages. Meanwhile disturbing information was received that some ivory poachers were pursuing him and had in fact shot at him but the bull managed to survive.

Two female *koonkies* were arranged for the operation. The bull was darted from foot using 700 mg of Xylazine and 300 mg of Ketamine in a single syringe and was completely immobilized in 35 minutes. Here again the *koonkies* were placed in the flanks and the hind legs were looped. Two gun shot wounds were noticed on his body, one at the right buttock and another on the forehead. The bullet from the buttock wound could not be removed but proper dressing was done into the maximum depth of the channel (17 cm) and antibiotic was applied locally. The bullet on the frontal shot at the base of the trunk could have been fatal, but interestingly, it traveled upwards for about 50 cm sub-cutaneously and rested under the skin over the frontal bone. Probably, the bull raised his head when he was shot and therefore the bullet instead of penetrating the skull moved under the skin. A huge abscess was formed at the location of the bullet, which was drained and the bullet was removed. The wound was dressed and fly repellent cream was applied.

With due permission from the Chief Wildlife Warden, his tusks were trimmed to make him less interesting for ivory poachers. Long acting antibiotic and tetanus prophylaxis was administered parenterally. It was interesting to record that the animal moved into his abode, the Panpur Reserve Forest, following the treatment and was seen in company of an adult female rhino for about two months, then at the end of the rainy season, crossed the Brahmaputra and entered Kaziranga National Park. He did not come back to Sootea thereafter.

#### *Case #4*

After the high floods of 2001, a makhna was reportedly stranded in the *maiyan chapori* (a small river island created by siltations) in the middle of the river Brahmaputra near Dibrugarh town in Upper Assam (Fig. 4). He was thought to have been washed down by the high floods of the river from upstream in Arunachal Pradesh. Initially, he was moving very little and was restricted in a small area. Scouts could see a huge injury on his right arm region, which was exuding blood and pus. Another low flood delayed an attempt to render him medical help and finally the operation began about twelve days after the initial report of him getting stranded in the river island.

As we came to the island, we saw farmers' houses demolished and granaries emptied; the farmers were cursing their ill fate but said no word against the bull as people in this land believe that the elephant will know if he is admonished and would take vengeance. Fresh foot marks in the soft paddy fields revealed that it was a huge animal and there was no evidence of limping. No *koonkies* could be arranged for the operation as there were no captive elephants in the nearby areas. The bull was spotted wallowing in the shallow waters near the bank of a major watercourse of the river. As we approached him in a boat from upstream, keeping some distance from the bank, he got up and walked inland. But the turbulence of the river drifted our boat dangerously close to him and the bull mock charged us, kicking the mud from the bank into the water. While passing by him at speed, he was shot in his

triceps with a metal dart containing 700mg of Xylazine and 300 mg of Ketamine. He was immobilized after 35 minutes, but the absence of *koonkies* made it difficult to handle him in the open area, so another supplementary dose of 300 mg Xylazine and 200 mg Ketamine was administered with a second dart. He was now fully immobilized and his wound on the right arm region (probably caused by a spear) was examined. The wound was infected. While wallowing, the bull kept the affected leg under water probably as a protection from flies and to get the soothing effect of the cool running water. No foreign body could be located inside the wound. The pus was completely drained, the wound was dressed with tincture of iodine and a fly repellent cream was applied. A long acting antibiotic and NSAID was injected.

The bull was about 60 years old with large areas of depigmentation over the dorsum of the trunk and forehead. The outer borders of the bull's ear pinnae had massive corrugations coupled with loss of pigments reflecting his advancing age. It may be noted that until they are very old, the skin depigmentation in elephants of North-east India is much less compared to those in the rest of the country and may be due to the low intensity of the sun and moderate climate. The wound healed in a couple of days and then he was shown his way into the Dibru-Choikhowa National Park using *koonkies*.

#### *Case #5*

The infamous elephant poisoning case of Nameri which killed as many as 16 wild elephants in 2001 had serious fallout for another young tusker who lost all the members of his family in the tragedy when he was too young to understand. The calf was barely a year old when he became orphaned and missed the normal learning process that is part of growing up in a social atmosphere. He grew in solitude, loitering aimlessly and sometimes even entering villages. As he grew up to be a young tusker, his visits to the villages started creating trouble. Then he made things worse for himself by knocking down a woman in a paddy field in broad daylight. After about a month he was spotted inside the park limping

severely with pus oozing out from a huge swelling over the right arm region. He was captured by noosing, for which wildlife departmental *koonkies* were used.

The bull calf was sedated with 150 mg of Xylazine and 100 mg of Ketamine administered by a hand held syringe using the *koonkies* to squeeze him between them for restraint. As the anesthesia was induced, the opening of the abscess was enlarged, pus drained out and the cavity was explored. A metal piece, the tip of a spear broken from its bamboo handle was recovered from the depth of the wound (Fig. 1). The spear tip was 13 cm in length. Antibiotic and tetanus prophylaxis was administered and the calf made an uneventful recovery.



**Figure 1.** Spear tip recovered from the young bull of Nameri.

#### Case #6

Another bull calf of similar age (approximately 5 years old) was spotted wandering aimlessly in the fringe of a tea garden in the north of Durrang district (Fig. 2). He was behaving erratically and even walked into the labour lines in broad daylight. There was a deep puncture wound on his right forearm region oozing blood. Unfortunately, the calf died before medical care could be arranged. A necropsy was performed and a deep gaping wound was discovered on his right arm region, which, on dissection revealed a burned deep circular hole to the depth of tissues up to the bone. The wound was apparently caused by a red hot

spear stabbed into the elephant. Some undigested rice was also recovered from his stomach, but whether it contained any poisons



**Figure 2.** Young bull killed in Darrang district, probe in the arm shows the spear injury.

#### Case #7

Yet another towering older *makhna* was noticed lame on his right foreleg by the forest guards in the Laokhowa Wildlife Sanctuary. A deep circular cut mark was also observed in his tail. He was tranquilized on 15<sup>th</sup> of March, 2006 by darting him from the ground using 500mg of Xylazine and 300 mg of Ketamine which was supplemented by a second shot of 200mg of each of the drugs 20 minutes after the first shot. It was interesting to note that when he was located, he was wallowing in a stream inside the park dipping his tail under water in an attempt to avoid the annoyance of flies. When the bull was completely still, he was approached and a deep hole was discovered on the inside of his right arm region. The channel was probed but no foreign body could be recovered; probably a pointed spear used by fishermen of the area was thrown and pierced him, but he might have removed the object with his trunk. The cavity was curetted and dressed with tincture of iodine.

The circular cut in the middle of the tail was curious as the injury appeared quite mysterious (Fig. 3). No person could have inflicted an injury like this as it cut into the tissues uniformly from all sides of the tail at the same level. It resembled an indentation that develops around

the trunk of a tree that is tied with a metal ring at a young age and as the trunk grows the ring cuts into the wood. There were a few maggots at the margin and the wound emitted an offensive smell. It was very painful to touch and the animal moved the tail when handled even at the height of the sedation, and once even raised his right hind leg to kick. The absence of *koonkies* was felt while handling him. However, a jute rope was used to tie the hind legs in a figure of eight knot, and then the tail wound was handled. On careful exploration, a plastic ring was discovered at the depth of the wound, which was carefully cut and removed. The circumference of the ring was 29 cm whereas the circumference of the tail at the area was 44 cm. How and when the bull got it tied around his tail remains a mystery. His tail was full size around thirty five years ago and could the plastic remain intact for such a long time if it was there for so many years? Why and how would one tie a knot around the tail of a wild elephant? Was it a feral elephant? But no evidence of a past captive life like scars around the neck or the legs could be seen. It seems this mystery will never be solved.

A few other tennis ball sized swellings, one at the left arm region and two on the right buttock were also noticed as testimonies of gun-shot wounds that he must have received as punishment for raiding crops or villages. A long acting antibiotic, NSAID and tetanus prophylaxis was injected. The tail wound was dressed, antiseptic and fly-repellant cream was applied liberally. The bull made a quick recovery from the leg and tail wounds.



**Figure 3.** The bull of Laokhowa with the plastic band cutting into the tail.

## Summary and conclusion

The foregoing discussion of treatment rendered to wild elephants injured in the hands of humans in the North-eastern region of India is probably only a tip of the iceberg; there are scores of other elephants which received minor injuries caused by retaliation by farmers when their crops or villages had been raided. This author has seen many wild elephants with visible swellings in different parts of their body mostly caused by shots from firearms. The human-elephant conflict situation is becoming worse with every passing year. The attempts by the government and non-government agencies are falling short in resolving the conflict as fresh areas are being opened by land-greedy farmers and elephants are progressively losing their areas to humans. Some conclusions that the author seeks to draw from his experiences of treating the injured wild elephants in the North-eastern region of India could be summarized as follows:

1. Wild elephants respond to treatment well, and it is worth attempting to render medical care to save the life of an injured wild elephant rather than allowing it to die painfully.
2. Wild elephants keep exuding wounds submerged under water to get relief from pain and the annoyance from flies; many gaping wounds would probably heal naturally if there are suitable water bodies in the area.
3. A considerable amount of supplies and expertise are required on the part of the team attempting such a medical care operation.
4. *Koonkies* are very useful in handling sedated animals for the safety of the operating team.
5. All the elephants that were found injured were males, though the percentage of females in the elephant population of the region is quite high; adventurous by nature, and loose attachments with the herds probably exposes males to injuries more frequently.
6. A rapid reaction team of experts with all needed supplies should be constituted for such purposes by the government to be able to help

an injured wild elephant, as early treatment is likely to yield better results.

7. Serious attempts should be made to reduce the human-elephant conflicts to eliminate such man-made injuries in wild elephants.

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*Author's e-mail:*  
*kushalkonwar@hotmail.com*



**Figure 4.** The old bull in the Brahmaputra near Dibrugarh.