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OUTBREAK



PHOTOS: ANIRBAN DATTA-ROY

Death in the Hills

Mithun calves, Arunachal Pradesh's hill symbols, are threatened by an epidemic of foot-and-mouth disease

BY ANIRBAN DATTA-ROY & KARTHIK TEEGALAPALLI

THE TWO-month-old mithun calf lay by the side of the road. Its lifeless glassy eyes stared into nothingness, but its feet twitched occasionally in spasms before death finally came. The young mother stood unsurely beside the calf, licking it at intervals. Scenes like this played out virtually every day in the last few months, reminding us of the epidemic that had besieged this remote corner of Arunachal Pradesh. The killer was a virus (*Aphthae epizooticae*) belonging to the Picornaviridae family, causing the dreaded foot-and-mouth disease.

Bomdovi village in the Upper Siang district of Arunachal Pradesh is peopled by the Adi tribe, the second most numerous tribe in the state. Further toward the north lies Tuting, the last town before the border with Tibet. The mighty Siang River flows below the village, while the snow-capped mountains to the north provide a glimpse of the spectacular beauty of the Siang valley. It's a picturesque agrarian society, except Adis not well.

Foot-and-mouth disease (FMD) had made its way into the mountains from the plains of Pasighat. The worst affected were the semi-domesticated mithun (*Bos frontalis*) that were dying out even as their owners watched helplessly. Each day, as one more animal was found



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dead in the forest or beside the road, another few were seen salivating profusely from the mouth as the infection spread rapidly.

To a person unfamiliar with this region and the lifestyle of the people, it would seem to be just a minor problem. Surely, livestock die all the time across the country. So what was so different about these deaths? It is impossible to gauge the scale of the

tragedy without an understanding of what mithuns mean to people in these parts. The mithun is an integral part of the cultural and socio-economic life of a majority of the tribes of Arunachal Pradesh. Among the Adis, the number of mithuns owned by a man determines his wealth and prestige. Traditionally, it has been used for barter, paying fines as well as bride price. Even today, mithuns are used as a form of currency in villages across the state. The Adis are primarily animists and major festivals such as Solung, Mopun and Aran are inextricable without the animal's sacrifice. When a member of the Adi community dies, he is buried with the skulls of the mithun that he had offered in sacrifice during his lifetime.

An adult mithun weighs about 500 kg and its meat forms one of the most important sources of protein for remote tribal villages like Bomdovi, which do not have access to town markets. Incredibly this animal demands minimal care from its owners. Mithuns are free-ranging and reside in the forests around the village. The only attention they demand are occasional treats of salt that are provided by their owners. The price of an adult mithun in the Upper Siang ranges from Rs 25,000-30,000.

FMD is a highly infectious viral disease that affects both domestic (cattle, pigs, sheep and goats) and wild (buffalo, goat, deer, wild pigs and many more) even-toed ungulates. Since its first description in 1546 and the dis-



TIED TO THE LAND: (Clockwise from top) A young mithun; a mithun being taken for sacrifice at the annual Aran festival; the Siang river; a mithun afflicted by the foot-and-mouth disease

covery of the virus in 1897 by Loeffler and Frosch, it is considered to be one of the greatest threats to animals. The disease gets its name from the advanced pathological symptoms which manifest as lesions in the foot and mouth and excessive drooling of saliva. It spreads through contact. About 5,000 outbreaks of the disease have been recorded from India that have affected about three lakh animals resulting in an economic loss of about

Rs 4,300 crore annually. While these figures are startling, it is derived mostly from livestock deaths in mainland India, while much of the mithun and livestock deaths in the hills remain unreported. Sadly, even the most accurate figures would not reflect the cultural and socio-economic losses that hill communities such as the Adis are facing.

There is also the very real risk of the disease spreading to other wild animals. This

area is located very close to the A National Park and the Dihang Dil phere Reserve. The community, the villages too harbour an increase of wildlife. As mithuns are free they can very well spread the disease landscape.

The war signs have been almost a year in the form of an among other districts in Arunachal Occurrence of FMD was reported September from Kurung Kumey western Arunachal Pradesh, followed which it was reported from the west Siang districts in January till the last two months, the disease to the mithuns in Upper Siang district caused the deaths of about 25 in Bomdovi village alone. Several more have occurred in other villages a Pasighat-Tuting Border Road. However, are only of those animals have been found. It is possible that death toll is much higher as animals could have already died and remained undiscovered.

This is not the first time that it came to this part of the country. An epidemic of FMD had also occurred in 57 villages in the state between 1995, infecting 6,237 mithuns in over 800 animals. Even the strain causing the earlier epidemic in Arunachal Pradesh was identified as the Asi serotype.

To their credit, the veterinary is supplying free vaccines and meeting the villagers. Unfortunately, the villagers to come to the nearest to collect the vaccines or the medicine areas, this is a major limiting factor involves a long unenviable walk in absence of local transport or if FMD can be prevented through unaffected animals and enforce antine to stop carriers from mingling other animals. Last year, the 'Mil Camp' organised by the Krishi Vig in some parts of Papum Pore district medicines were distributed and initiated, raise awareness to a large. Similar programmes need to be initiated to stop future outbreaks.

It is a bit late to be able to do the people of the Bomdovi village other affected villages. There has been earlier to compensate mithun owners their losses, notably from senior within the state. While this would be of great help to people in these larger, eliminating FMD and eradicating epidemics from the hills, would possible compensation.

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