CHAPTER TEN

CONSERVATION AND MANAGEMENT

Conservation of wolf in India is a very controversial issue. All over its distribution, the wild prey of the wolf has largely been decimated, so the wolf depends on livestock. Unlike its temperate cousin, the wolf in India is mainly found in scrubland, grassland and marginal agricultural areas. These areas are intensively used by human beings for livestock grazing, hence the wolf comes in direct conflict with man. There are very few sanctuaries (e.g. Velavador National Park, Jhala (1991); Rollapadu Wildlife Sanctuary, (Manakadan and Rahmani 1989); Melekote Wolf Sanctuary, Shahi (1982); Mahuadhar Wolf Sanctuary in Bihar) where the wolf survives.

During the last 15 years, some sanctuaries were established for the protection of Great Indian Bustard (Rahmani and Manakadan 1988), in marginal agriculture areas. With the establishment of these sanctuaries, good protection was given to all wildlife, resulting in the increase of Blackbuck populations. Wolves also increased in some areas, or at least they became more visible due to decrease in harassment. Wolf prey on Blackbuck and livestock, and Blackbuck feed on natural vegetation and crop. Farmers want the wolves to increase so they can decrease Blackbuck numbers but the shepherds want wolves to go as they kill livestock.

Crop-raiding behaviour of Blackbuck was investigated during this study to provide the basic information to the Forest Department for working out the compensation scheme for farmers against crop damage.
Under various conservation schemes, protected plots were developed by the Forest Department of Maharashtra state. The plots are dotted all over the Bustard Sanctuary, and many are outside also. These plots act as refuge to wildlife for food, shelter and breeding. Successful breeding of wolf was seen in two of such plots. The land which earlier was used as 'commons' for grazing was taken for these plots. Hence, the graziers suffer from two accounts: their common grazing land is taken over and their livestock is attacked by predators. In the democratic set up of India, no conservation movement can succeed unless the local people support it. The most important issue to be considered for wolf conservation is the payment of adequate compensation by the Government (Fritts 1982, Sawarkar 1986) for livestock destruction. Currently in India payments are made for Tiger and Lion kills alone. In Nannaj and elsewhere, the people are poor (average annual income is between Rs. 9000-10000) with small holdings and every loss of livestock is substantial. In order to prevent reprisal by shepherds against wolves, the Wildlife Wing of the Forest Department should pay suitable compensation to shepherds.

As the wolves at Nannaj depend mostly on wild Blackbuck for food during the non-breeding period, increasing the number of Blackbuck should decrease livestock depredation. However, it is not so simple. Firstly, livestock is easy to kill so if given opportunity, wolves go for easy kill. Secondly, crop damage by Blackbuck is a growing problem in Nannaj (and elsewhere in the Sanctuary), so any increase in the number of antelopes will be resisted by farmers. Farmers already illegally use snares to catch Blackbuck (Fig. 7.3). In few instances, wolves were caught in leg traps in Mohol and clubbed to death by irate villagers.
Habitat of the wolf is still abundant but continuously being disturbed by quarrying and industrialization around the Sanctuary. A spinning mill called Sharad Spinning Mill and an Oil mill have come up during the study period at Vadala and Karamba in the G.I.B. Sanctuary. Whereas setting up of another spinning industry (Gokak Spinning Mill of Tata Group) with a very large industrial setup in the Sanctuary was stopped because of a very strong protest by the State Forest and Wildlife Departments and the Bombay Natural History Society. These industries have direct disturbance on all the endangered animals viz., Blackbuck, Great Indian Bustard and the Wolf that are seen just around the campus of the Spinning mill. The movement of these animals is hindered by the workers at these industries. Several times Blackbuck die by hitting the forked bark, fencing the industrial premises.

For effective management of wolf in the area I recommend that there should not be any kind of disturbance upto a minimum distance of two kilometer from the core areas (protected plots) of the sanctuary.

Since the Sanctuary has an unmanageable area of 8,496 km² covering villages, towns, cities and several settlements, the boundaries as well as the area of the Sanctuary should be properly defined in order to reinforce the directives/legislation of the Wildlife (Protection) Act, 1972. One of the serious lapses in the Act is the continuous digging of the habitat of the Sanctuary due to quarrying which is detrimental to all the endangered large mammals of the Sanctuary. This is possible only if the highly populated areas falling in the Sanctuary be removed from it so it could become compact from management point of view. The Sanctuary area is densely populated with 101.29 people/sq km.
Fig. 10.4 Habitat Destruction due to quarrying around the Sanctuary
Stray dogs were observed hunting fawns (n=43) in the Sanctuary especially in summer (Fig. 10.1). They become a direct source of competition for food with the wolves during this period when Blackbuck is highly dispersed. Another threat to wolves from the dogs is the spread of diseases like rabies or any skin disease. These dogs should be killed by the forest guards.

At least for the trial sake, Reinforced Concrete Cement (R.C.C.) pipes should be implanted in the ground in plantation plots which could attract wolves for denning (Fig. 10.2). An R.C.C. pipe was regularly used by the wolves as a den during this study (see Breeding Biology). The wolves may take time till they become used to the presence of such pipes. The pipes should be placed in secluded areas and not in the open.

During the denning period of wolves (December to February) which is crucial for them (till the pups are restricted to dens), the sanctuary watchmen should guard active dens from a distance of 200-300 m against herders. Human travel routes and quarrying should be banned within a radius of 2 to 2.5 km around the den for the above mentioned period. The herders fumigate and block the dens during this critical period when pups are developing. The Sanctuary is a very good source of dispersal of wolf population to other potential areas since they are breeding successfully every year in this small relatively less disturbed area.

Shrubland patches present between adjacent plots of the Sanctuary should not be removed or thinned. It is recommended to maintain them at an optimal level so they
Fig 10.1 A stray dog feeding on Blackbuck fawn

Fig 10.2 An R.C.C. pipe placed in an open area by the sanctuary managers
would not affect wolf as well as bustards. The wolves and pups require 20-30% cover at their rendezvous sites (see habitat preference and use).

Malshiras, Sangola, North Solapur and Akkalkot are the best areas for long term survival of the wolf because of availability of prey and denning sites. Among these areas, Malshiras and Sangola have steep hills along their adjoining districts and have massive rock boulders. The soil under these boulders is loamy with soft texture which the wolves excavate easily for making dens. According to local people, they are using the same dens every year. The livestock population in each of these ranges is more than 20,000, which provides regular food.

The wolf is a highly endangered species, protected under the Wildlife (Protection) Act, 1972 but till now, not much has been done for its protection, mainly because of its reputation as livestock destroyer, and in some areas child-lifter. Fortunately, in Solapur district, no case of child lifting has been reported as far as I know but its so-called sheep and goat depredation makes it an unpopular animal. During the survey, all people interviewed about wolves responded with negative attitude towards its conservation.

About 42 children were reported to be killed and 22 were attacked and injured by wolves during 1996 in three districts namely Pratapgarh, Sultanpur and Jaunpur of Uttar Pradesh (a state in north India). I visited these areas during September-October 1996 for more than a week to investigate the cause of the problem. I was not able to find any direct evidence of wolves killing children. However, by examining the injuries and wounds on some children who survived their attacks, the pattern of bites was of a
wolf or possibly wolf hybrid. Based on the reports of few people in Jaunpur area, the possibility of existence of wolf hybrids in these areas, also cannot be ruled out.

78% of the victims (n=42) were of the age group 1-4 years and 64% of the victims which were attacked and dropped (n=22) off by wolves were 4-16 years old. All but four houses where these incidents occurred were located on the outskirts of the villages. The killings were done most probably by a single wolf or maximum by two as revealed by the measurements of tracks. Except for one child, all the incidents occurred either late in the evening or at night when people are busy in domestic chores or sleeping. Most of the killings were along Bakulahi and Sai rivers which pass through Pratapgarh and Jaunpur districts.

The Sai river courses about 72 km in Pratapgarh and 32 km in Jaunpur before joining another river known as Gomati. The strip of land on either side of this riverine course dotted by bushes and Acacia trees, is an ideal wolf habitat which probably harbour few wolves of the remnant population in the state. In addition, wolves are using certain patches of the "open" and "semi-open" pockets in the crop fields.

Again during February-March 1997, the wolves were reported to kill five more children and seriously wounded five others in Rae Bareli district which is adjacent to Pratapgarh. Most of these casualties were the direct result of negligence of people to protect their children.
The district administration had employed local trappers known as Banjaras and Kanjars to trap the killer wolves. Ten wolves and many jackals and foxes were killed by the Police and the Forest guards during the operation (Fig. 10.3).

No wild prey is left in these areas due to excessive hunting and there is hardly any wolf habitat left for wolves due to intensive agriculture. Moreover, these areas are densely populated. The wolves are living very close to humans in these areas and such incidents can happen anytime in future too.

The reports of wolves attacking man are extremely rare (Mech 1970) and wherever any such event has ever occurred, it has been exaggerated galore. It appears that one or two wolves had lost their fear of humans and regarded the children as prey. Carbyn (1989) has reported 14 Coyote attacks on children in the Canadian Rocky Mountains (Banff and Jasper National Parks), western Alberta, and Yellowstone National Park in northwestern Wyoming. It is the first time in the world that a large number of children fell prey to wolves (or wolf hybrids) in India. Earlier Shahi (1982) has documented killing of children by wolves in Hazaribagh area of Bihar in India.

There has been more public animosity towards wolves in the entire country after these child killing incidents of Uttar Pradesh during 1996-97.

Despite continuous persecution by human beings, the wolf has resilience to survive, chiefly due to its adaptability and intelligence. The wolf, like the Great Indian Bustard and Blackbuck, has responded positively to conservation measures in the form of plantation and grassland plots developed under various schemes. However, this has
Fig 10.3 A juvenile wolf killed in Pratapgarh district (Uttar Pradesh) in 1996
not reduced human-wolf conflict, the ultimate victim of which is invariably the wolf. It is a very complex issue, without an easy solution. Nevertheless, the following steps are recommended which might minimize human-wolf conflict and increase chances of wolf survival:

(1) Adequate livestock compensation for wolf depredations.

(2) Translocation of Blackbuck from locally-abundant areas to other suitable unoccupied habitats.

(3) Some measure of compensation for crop-damage by Blackbuck should be worked out to reduce Human-Blackbuck conflict.

(4) Special protection to denning sites and core areas which are generally occupied by wolves. (5) Development of large grassland and plantation plots, especially around denning sites used regularly by wolves.

(6) Intensive studies on the movement, dispersal, habitat requirements and general ecology of the wolf in Maharashtra, using modern techniques of radio-telemetry, marking etc.

(7) Regular wolf census in Maharashtra, at least once in two years.

(8) The patches of grasslands as well as scrublands between the protected plots of the Sanctuary should be taken over by the State Forest/Wildlife Department.

(9) The stray dogs seen in the Sanctuary should be eliminated.