Indian Forester, 139 (10) : 962-964, 2013
http://www.indianforester.co.in
ISSN No. 0019-4816 (Print)
ISSN No. 2321-094X (Online)

FORESTS NOTES AND OBSERVATION

(I)

CAPTIVE BREEDING OF INDIAN GREY WOLF AT MYSORE ZOO

Sri Chamarajendra Zoological Gardens, popularly known as 'Mysore Zoo', is one of the oldest zoos of the country. It was established in the year 1892. Zoo currently displays more than 1400 individuals belonging to 168 different species, out of which 74 species are exotics. Mysore Zoo has a tradition of exhibiting and breeding both indigenous and exotics for a very long time. During the years 2011 and 2012 a series of birth of many important and rare mammals such as dhole, Indian grey wolf, African cheetah, giraffe, striped hyena and hippopotamus brought loads of acclaim and appreciation in both print and electronic media. Successful breeding of wild dogs, wolf and first time cheetah birth in captivity in India are worth mentioning. Mysore Zoo had also succeeded in breeding of several exotic species such as chimpanzee, hippo, giraffe, African black rhino, marmoset, capuchin and many bird species.

Large carnivores like tigers, lions and leopards have been successfully bred in captive conditions all over the world. However, little has been mentioned about the success of captive breeding of wild dogs and grey wolves in captivity in India. Successful breeding of grey wolves was achieved in the zoo and the interestig observations on the behaviur of these animal has been discussed in this paper due to better animal husbandry practices and enrichment with vigilant and constant observations.

Indian Grey Wolf: *Canis lupus pallipes*

Indian grey wolf i.e, Canis lupus pallipes is the smallest among all grey wolves. They live in arid and semi arid regions of India. In groups of 6-8 animals and feed on small antelope, hares and rodents. They adapt very well to hot climates. They breed once a year from middle of October to late December (Prater, 1965).

A pair of Indian grey wolf was brought from Gadag Zoo, on 1.5.2010. The male was given the Global accession number MIG-12-29559193 and female with MIG-12-29930358 with the house hold names as Raja and Rani respectively. Their date of birth was recorded as 01.01.2007 with unknown parents as both animals were rescued from the wild. The pair adjusted very well to the atmosphere.

First mating behaviour was observed for two days in the second week of November 2010. Considering successful conception, both male and female wolves were given unrestricted access to holding rooms with artificial den and open enclosure. A physical change in the female was noticed by 30days of gestation and it has started burrowing at different places in the open enclosure.

By 40 days of gestation, female choose its den area in the north–western corner of the open moated enclosure just by the side of the inner moat wall and started burrowing almost continuously. The den was deep and long. Although male was always with the female, it was never observed to assist in burrowing the den.

By 50 days of gestation, prominent abdominal distension was seen. About 3-4 days before parturition, female was less active, lethargic, relaxing of external genitalia and most of the time resting inside or near the den. On the morning of 13th January 2011, female came out of the den with completely collapsed abdomen, indicative of whelping in the den.

Male wolf was watching the den at a distance and never went nearby. Female was little aggressive towards the male. Food was offered twice a day with nutritional supplements. Dam was readily coming out of the den during feeding times, but, it was very aggressive towards male while feeding. Male wolf was not competing for food and maintained little distance from female. After 10-12days female was seen friendly with the male and frequently come out of the den and rested with male. Three pups were seen coming outside the den for the first time at the age of 23rd day. On subsequent days more pups started coming out and finally on 27th day seven pups (5:2) were seen coming out with mother for a short time in the evening. By this time dam started carrying the meat for the pups in den and pups were seen playing with large pieces of meat. Sometimes female was seen carrying young ones in the mouth and going round in the enclosure.

Pups started moving outside the den slowly for longer distance and for longer time. By 40th day of age, pups were seen playing with male and both sexes seem to be sharing responsibility of caring and protecting young ones.

Two (1:1) out of seven pups had scanty hair coat with light skin colour – a genetic disorder.

The den was seen almost in 'L' shape with a depth of 5-6 feet from the surface and then it moved horizontally with slight elevated portion. The den was made in such a way that even if there was any chance of rain, pups would be safe from any collection of rain water.

Routine examination and prophylactic measures like deworming and vaccination were undertaken as per schedule. However, three pups including two female pups died due to acute generalized infection and respiratory problem.

Second litter

Second time breeding was noticed little early. Mating activity was seen in the last week of September 2011. Breeding behaviour was similar to previous year and the female chose the same place for den making. Precautions were taken to keep a low disturbance around the enclosure.Occasionally male also used to partner in den making. Male pups of previous litter were not involved in den making. Animal activity was observed visually and it was noted that second litter was delivered on 8th December 2011.

The second litter has a size of 5 pups with two female and three males. The young pups at the age of 45 days started taking chicken pieces along with mother's milk. They were seen coming out of the den and playing with older litter and there was no resistance by the dam. The pups and parents were released to public display from 30.01.2012 onwards. Both litters mixed very well with parents taking care of all the surviving nine pups.

Third litter

This time when the Alfa female came into estrus in the third week of October, she tried a lot to pursue the Alfa male to mate her. She used to go to him, nudge him and rub onto his body sniffing and licking his genitals, but the Alfa male was not responsive to her stimulus. In the last week, two males from her second litter were observed trying to mate her. Initially the female had showed some aggressive behavior towards these two males but subsequently she yielded to them. It was observed that her daughter from the second litter also came into estrus and was also mated by these males. After a gestation period of a month, the Alfa female was observed to look for a suitable place to den. She had tried two places, one new and another one beside the inner moat wall in which she had whelped previously. In the last two weeks of gestation, her denning activity increased in the one in which she had whelped. The Alfa male and the other males also helped the female in digging the den. Then a problem occurred with the den. One of the stones of the moat wall started to sink into the den. We had our concerns, whether she will be able to give birth in this den. Finally on 31/12/2012, she gave birth to 6 pups. The pups were heard crying for milk and the mother was seen attending to the pups. On 05/01/2013, the female took one of the pups outside the den, carrying it in her mouth. Later she went back into the den and kept it there.

Unfortunately, after a week, another female from

her second litter was due to whelp in another 3-4 days. On 06/1/2013 morning, she tried to occupy her mother's den by bringing out the pups. The mother of the pups went to her daughter and they were communicating calmly. There was no act of aggression between them. But the pups got exhausted and died that morning. It was observed that the mother had not attended the pups since that morning till afternoon. Fearing that the pups may not survive, they were lifted from the den.

On the same day five pups (4:1) were brought to the zoo hospital. They had no yet opened their eyes. The pups took some time to get adjusted to the bottle feeding. They were fed with diluted cow's milk once in every 3-4 hours along with supplements. Meanwhile on 08/01/2013, the second litter female also gave birth to the pups. But the pups didn't survive and died one after the other due to either cannibalism or starvation. In this 3rd litter, a female had developed an abscess over her right shoulder. Next day the abscess was lanced and pus was removed and antibiotics were given orally. The spread of the infection was too fast and after two days the pup died due to suppurative myositis and panniculitis.

Now 4 male wolf pups are there in the zoo. Teething was observed when these pups were 20 days old. Their suckling activity was so much that they started to suckle the foot of their siblings, which resulted in swollen digits. Such affected pups were isolated for few days and medicated. Initially chicken pieces (approx. 25 grams) 3 feeding per day was fed with milk, which was readily accepted by the pups. The quantity of milk and meat was gradually increased. After another week, beef was also included in the diet. Feeding milk was stopped after a month. The pups were dewormed and vaccinated against rabies and DHPPI. Transponders have been implanted along with ear notching for external identification.

Conclusions

For breeding of wolves, area must be made available for natural den making and least disturbance to be maintained during the den making and after delivery i.e. for a period of 45-55 days. They are very social animals and must be allowed to mix with different litters. Sometimes intervention and improvisation is required when the situation demands, however, natural maternal care is better than hand rearing. When population consists of two or more litters, there must be more than one den in the enclosure. In the instant case success of three litters could be attributed to the collective efforts of animal section and veterinary section with application of skills and practices learnt during these years.

Reference

Prater, H.S. (1965). The book of Indian animals. Bombay Nat. Hist. Soc. Press, Bombay, 324 pp.

B.P. Ravi, C. Suresh Kumar,
Dhanalakshmi, Kshamma and Prashant

Sri Chamarajendra Zoological Gardens,
Mysore