

Summary

Ecological and behavioural study of stray dogs (Canis familiaris) was conducted in North Bengal. This study is the first of its kind in this part of West Bengal, India.

In this region dog population is increasing gradually and they breed once in a year. In Jalpaiguri district dog-man ratio ranged from 1:47 to 1:84 and is higher in urban areas.

The stray dogs are territorial in nature irrespective of seasons. Size of their territory and home range is greater in rural areas than in urban areas. Easy availability of food , mate and suitable nesting sites in urban areas have been suggested as reasons for smaller territory and home range size in these areas.

Among stray dogs scent marking by urination has been found to be one of the most important form of communications under various social contexts. Several postures of scent marking in dogs in both sexes has been recorded. Scent marking serves a host of functions including territorial demarcation and defense, familiarizing and reassuring oneself in one's locality, dominance status etc. Marking rate increases significantly under mating and aggressive situations.

Aggression is a prominent behaviour pattern in the life of stray dogs. Both males and females participate in aggressive encounters. Aggressive motor patterns recorded are :

' threat ', ' chase ', ' roar ', ' snarl ', ' bite ' and ' fight '. In nonmating season aggression , however , is mostly ritualized and of benign nature . In mating season , on the other hand , overt and serious type of aggression is noticed in both the sexes which on occasions lead to fatal injury . Fights among males while associated with an estrous bitch in the mating season are often fatal in nature . Mother dogs after parturition and a few days thereafter remain in a highly aggressive state . Interspecific aggression has also been observed and is mostly with domestic animals and foxes .

Food habits of stray dogs are profoundly influenced by their association with human being and mainly consist of cooked food , freshly cut bones and entrails of goat and sometimes even human faeces . Sharp preference towards flesh and bones of animals was not observed . The feeding habit of stray dogs serve to prevent escalation of sanitary and pollution problems in the locality .

Mating season in stray dogs in North Bengal region is strongly influenced by temperature . In the plains mating takes place from June to December but in the hilly areas such as Darjeeling , Kalimpong , Kurseong etc. it occurs from March to June when ambient temperature is higher than the other months of the year. Male dogs attain sexual maturity at the age of 11 to 16 months , whereas the females do so at 10 to 14 months. Mating between peermates and mother and son were not found in this study. Experiments to enforce mating among peer - mates reared away from one another from weaning failed. Similar endeavour to cross mother

and sons who were reared away from the mothers right from weaning also failed.

Bitches generally preferred males with moderate aggressive indices . Feminine selectivity for successful mating is a characteristic feature in stray dogs . Scent marking played a major role in the regulation of successful mating.

In dogs parental care is predominantly a prerogative of the females. The physical and behavioural development of the young is directly correlated with maternal behaviour.

Gestation period in dogs extends from 65 to 70 days. Females usually gave birth to their youngs in a nest within their own territory . In the present study most births occurred at night. Mother dogs use insulating materials in their nest as the birth season occurs during winter months i. e. from October to February. Puppies born to naive mothers are lighter than those of the experienced mothers. It is found that weight of a litter at birth as a percentage of maternal weight is about 2 %.

During neonatal period naive mothers spent maximum time with their puppies in comparison to experienced ones. The puppies receive all the requirements such as : food , shelter and protection from their mother.

Development of dominance hierarchy among puppies starts from the neonatal stage . Rigid dominance hierarchy among the peermates develops through play when the puppies attain the age of about two months.

Percent increase in body weight is highest in the first week after birth . During the first 30 days of post-natal life the puppies gained 19.84 to 21.07 gms. of weight per day.

During neonatal period the mother dogs are seen to react strongly to smell of urine of stranger males and females. It also proves that mother dogs during the early postnatal period are highly intolerant of unfamiliar conspecifics.