

CHAPTER-6

SUMMARY

The common Indian Peafowl (*Pavo Cristatus*) is terrestrial bird found in deciduous forest, cultivated lands as well as urban and rural area. They remain in small group. As a National bird, Peafowl is given special protection and is included in the schedule -I of the wild life protection act (1972). The ecological aspect and adaptation in Peafowl were studied in Bhavnagar District . 81 % roost site was situated near crop fields. Peafowls were roosted on trees at night , for selection of roost site some important factors were good characteristic roost tree , distance of water from roost site ,distance from human habitat and from road. 23 tree species were found in study area out of them 14 species were used by Peafowl as a roost. Among them *Azadirachta indica*, *Cocosnucifera* , *Ficus bengalensis* and *Prosopis juliflora* were the main roost tree occupied 76 % of total roost tree. Peafowl was not found to be used *Prosopis juliflora* and *Zizyphus mauritiana* for roost except in Bhavnagar District. The Peafowl selected live and unbroken canopies of the tall trees for roosting. It was observed that Peafowl used three places for roost other than trees in Bhavnagar District namely, High tension line electric pole, the Peak of temple ('Sikhar') and Telephone antenna pole. Arrival and departure timings at roost did not remain constant through out the year but changed with seasonal photo period, the number of Peafowl arrived per minute at roost were higher (1.62) than the number of Peafowl departure from roost (0.23). As Peafowl is a gallinaceous bird, it avoid to fly if not necessary. Pre -roosting behaviour was involved in preening and to settled its feathers during this time. In the study area total of 13 species of birds were recorded roosting with the Peafowl in mixed roost.

Peafowl showed distinct breeding and non-breeding season in the area and the season was June to August. The bird is a polygamous and the male mate with

two or more females. Adult males with a completely developed train establish display territories in mid April and maintain them until the end of breeding season. 78 % territories having roost tree, 78 % territories were located distance from road , 60 % were located near water source and 81.5 % were located distance from human habitat. Mean number of repetition of main loud calls in relation with sexual behaviour were 3.86 but in central territorial male it were 5.40 No any evidence of harem defence was found during study period , but female moves from one territory to another during its visit. Male was found to remain isolated during breeding season. Nest site selection was done by Peahen and important factors for that were distance from road , distance from water and distance from human habitat. Peahen was observed to use old nest repeatedly, nest was found simple scrape type and generally located very close to the hedge which increased chance of concealment of Peahen. Clutch size was found 4.75 having maximum 7 eggs and minimum 3 eggs in a nest. Average size of egg was 06.75X05.25 cm and average weight was 110.09 grams, maximum weight of a single eggs found to be found 128.800 grams. Incubation period was 28 days and it was done by the female. During incubation, weight loss was to be found nearly 11 %. Parental care was highly developed in Peafowl and care was taken by female ,early and late mortality rate was high (56.50 %) , more number of females were found with 1 or 2 chicks after breeding season. Shedding of train feathers were started from late August and continued till month of October. Chick can walk very nicely right from first day and take food it self. Main predator of the bird in area was Dog, Jackle, Jungle Cat and human. Paralysis was observed in the bird.

Peafowls were most active at the coolest period in the morning (7:00 to 10:00 hrs.) and again between 16:00 to 19:00 hrs. in the evening, in the middle hours of the day (11:00 to 16:00 hrs.) they were found to take rest the resting time was shortened during winter. Activity period was highly correlated with photo period ($r=0.97$), beginning of activity of Peafowl was found parallel to time of activity and same way end of activity was also found parallel with the sunset time. Bird would like to prefer forage in crop fields in all three seasons where as the other microhabitat were used more in monsoon, water was effecting factor for Peafowl at feeding site in different microhabitat, Peafowls would prefer to forage near human habitat but the percentage was not so high. During non breeding season Peafowl spend about 33 % in feeding and 40 % time in rest but in breeding season Peacock feeds only during 17.25 % time as they spent nearly 25 % of its time in display and calls.

Peafowl is omnivorous bird using large number of plant species and some animal species. During study period Peafowl was observed to use 48 plant species including vegetable , crop, grasses , cereals, food grains and some wild plant species, bird was found to use more insects during monsoon. It was noted that Peafowls were found in association with 14 bird species at feeding site in different microhabitat among that Black Ibis were observed several times with it. Peafowl was very harmful to certain crop e.g. Ground nut, Ghaun, Rajko, Juwar and vegetable crop like Tomato, Ringan, Chilli etc. It was found that population trends were strongly negative in some part of District as well as in the study area. Responsible factors for negative population trends were, shortage of water for irrigation, predation pressure, poaching and use of insecticides.