



ECOLOGY, BEHAVIOR AND CONSERVATION OF INDIAN PEAFOWL (*PAVO CRISTATUS*) WITH SPECIAL REFERENCE TO CHIDIKHO WILDLIFE SANCTUARY MADHYA PRADESH, INDIA

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ABSTRACT The Indian Peafowl's (*Pavo cristatus*) is Least Concern (LC) category on Red list and Schedule I species as per Wildlife Protection Act (1972) in India. The Indian Peafowl (*Pavo cristatus*) is national bird of India and currently facing various threats in its entire distribution range. The present study was carried out to assess the behavioral activity patterns of Indian Peafowl in location chidikho wildlife sanctuary narsingharh (mp). A short study was conducted to understand the ecology and behaviour of Indian Peafowl, to assess its habitat, roosting preference and activity pattern during breeding time in and around Chidikho wildlife sanctuary (mp). Indian Peafowl is the largest among the pheasants. It belongs to the family Phasianidae and order Galliformes. *Pavo cristatus* have received mention in various cultures and mythology. It is locally common endemic breeding resident of India, Sri Lanka and Nepal. The preferred habitats of this pennant species are scrub jungles and forest fringes, dry deciduous and semiarid regions, agricultural fields, along streams and near human settlements. They are omnivorous and feed on a variety of animal and plant material.

SUMMARY: the present findings concluded that there is a rich population of Indian peafowl in chidikho wildlife sanctuary narsingharh (mp) due to the presence of rich vegetation diversity. Still there are some threats like high extension wires, hunting of peafowl for feathers vehicle pollution etc. The breeding season of Indian peafowl is not fixed but mostly it breeds in rainy season from April to August.

KEYWORDS : Chidikho wildlife sanctuary, Indian peafowl, activity pattern, behavior.

INTRODUCTION

The Indian Peafowl *Pavo cristatus* also known as the Blue Peafowl is the national bird of India and comes in Schedule-I of the Indian Wildlife Protection Act, 1972. This bird is listed as of Least Concern (LC) by the International Union for Conservation of Nature (IUCN). The Indian Peafowl is a resident breeder across the Indian subcontinent and found mainly on the ground in dry, semi-desert areas, grasslands, scrublands, open and deciduous forests, roost in trees or other high places at night. Peafowls are omnivorous and eat seeds, fruit, insects, small rodents and reptiles (snakes, lizards). The species was first described by Linnaeus in 1758 and named *Pavo cristatus* and same is still in use now. The genus name *Pavo* derived from Latin word *pawe*, which means peacock, and the species name *cristatus* refers to the crest (Sclater, 1860). The male peafowl are referred as peacock and female referred as peahens. The male is brightly coloured while the female have duller brown plumage. It is believed that the dancing peacock is an indication for off set of rains.

The significance of peacock is attached to cultures of India, Far East, Ancient Persia, Greek and Christian. It occupies a sacred position in Hindu mythology subject of voluminous folklore as well as in Sanskrit, literature and poetry (Thaker, 1963). It roosts on trees and also uses tall buildings where trees are scarce. It generally prefers a habitat mosaic of scrub and open areas, with adequate sites for dust bathing and lekking, a phenomenon where males are known to congregate in open areas for displaying to attract females (Yasmin and Yahya, 1996). Peafowls are very shy birds they escape very immediately if the sense some danger. They are usually social birds but they are very aggressive if someone try to attack on their territory. They are known very well for their fighting abilities with snake. The poaching of peacocks for their beautiful and colourful feathers is one of the main reason of their population decrease. peacocks are threatened due to habitat loss, hunting and predation..other species of peafowl like Congo peafowl is vulnerable species and Green peafowl is an endangered species. peacocks are the victim of fashion trade.

Systematic position

Kingdom: Animalia
Phylum: Chordata
Class: Aves
Order: Galliformes
Family: Phasianidae
Genus: *pavo*
Species: *P.cristatus*

Study area: The study area for different ecological aspect of Indian peafowl (*pavo cristatus*) are narsingharh, wildlife sactuary (chidikho) and some areas of rajgarh district near crop fields and riparian site.

Narsingharh Wildlife Sanctuary:

Narsingharh wildlife sanctuary, established in 1974, is situated in rajgarh district, madhya Pradesh .90 kms from mp capital Bhopal and 221 kms from Indore .

The sanctuary is spread over an area of 57 sq km. The most popular animal species found at sanctuary include chital, sambar, blue bull, leopard, crocodiles and wild boar. it is also known as CHIDIKHO. there are Hundreds of natural caves found in the sanctuary. Chidikho tank situated in the heart of sanctuary is habitat of several local and migratory birds.

Over 164 species of birds can also be sighted here. the main attraction here is the peacock. the climatic conditions are favorable for the peacocks. state bird Dhudhraj is mainly seen here in the sanctuary. there is nature trails in the sanctuary by roaming in the nature trail we can watch animals and birds very near to us also there are watch towers by which the animals are observed without disturb them and if we are far away from them we can observe their natural habits and behavior. Due to its natural beauty Narsingharh is also known as Kashmir of malwa region.



Fig 1: Watch towers in chidikho

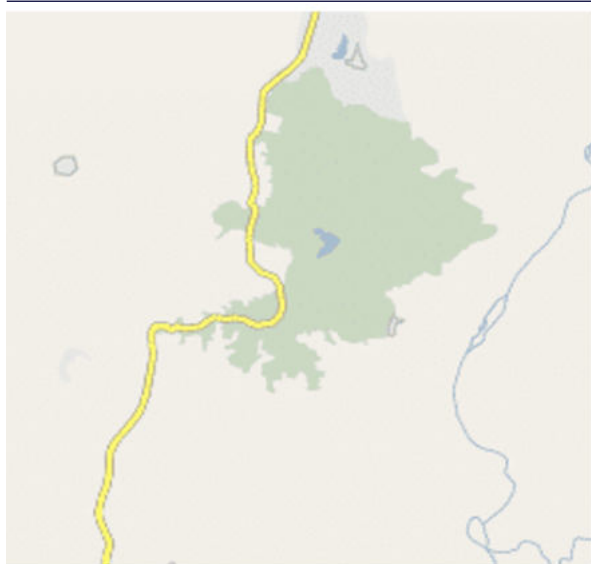


Fig 2: Map Of Chidikho And In Center Chidikho Lake



Fig 3: Protected Areas Of Madhya Pradesh Highlighting Narsinghar Wildlife Sanctuary Chidikho

MATERIAL AND METHOD

The present study on Indian peafowl (*pavo cristatus*) carried out in chidikho wildlife sanctuary narsinghar of rajgarh district (mp). The study was carried out by various methods like scan sampling (Altman, 1973) by watching them from watch tower 1 and watch tower 2 and record the behavior of peafowl in group. Scan sampling is a technique of observing and recording animal behavior with time intervals. with the help of stopwatch the duration of displays was measured during the scan sampling. Random sampling is considered here because it is a free ranging bird and presence of any individual at a place and time cannot be predicted. Indirect method of questionnaire survey method is also applied, Interviews were conducted and discussions was made with the forest officers and guards of sanctuary. For this study all the individuals of Indian peafowl are classified into three categories these are adult male, sub adult male and females because mostly they lived in harems. During the walk on the nature trail of the sanctuary the very closed sightings were recorded on the data sheet and the samples of their feed like insects and seeds are taken. The males and females are recognized by their colour appearance male have blue neck and females have green neck, also the male is more colourful then females so they are easily identified by first sight. All the behaviors of the activity of peafowl like feeding, running roosting walking, flying ,standing are noted on the notepad.

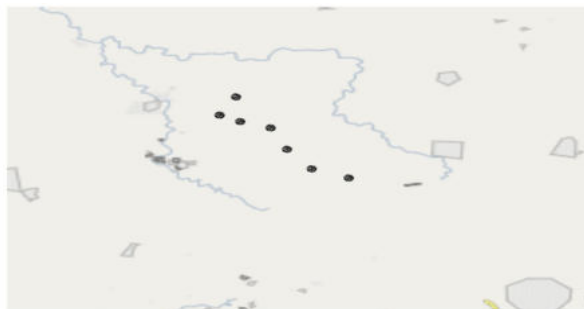


FIG 4: study area of sanctuary highlighting maximum sighting zones

RESULT AND OBSERVATION

For different behaviors the peafowl's used different habitats and different areas like for feeding they used the mid of the sanctuary where there are so many grasses seeds insects are available for courtship behavior they mostly preferred near the riparian site (chidikho lake) which is situated in the wildlife sanctuary, they also visit the nearest crop fields there are dominance of teak, dhawda, saja, khair , arjun, bhaeda, kronta. For this study the sanctuary was divided into three Blocks Block A, Block B, Block C. By the regular monitoring in the sanctuary it was observed that there are 42% males and 58% females inside the sanctuary. The day to day activity are studied by the process of scan sampling the day was divided into time intervals of 10 minutes the activities like roaming and displaying was carried out for 10 minutes the maximum display activity was performed in Block A where the lake is present. The activities are more observed in this area because there is watch tower present near to it so the activities are easily observed by standing on the height. The sex of the each individual of peafowl is identified easily by their neck colour, males have blue neck and the females have green neck. Age of the peafowl are determined by the length of the train and its feathers. Adult male of peafowl have mostly the tail feather more than 3 feet and sub adult male have less than 3 feet train feather. The sightings are mostly on the morning and evening, they preferred trees for roosting. Both the male and female spend more time in feeding but as compare to the males females spend more time in feeding. It was observed that in groups when they are feeding and one of the members of the group fly because of some reasons so the other members of the group also fly one by one after some minutes.

FIG 5: Animal feed of peafowl in chidikho wildlife sanctuary

S.NO.	Food item	October	November	December	January
1	Insects	++	+	+	+
2	Ants	++	++	+	+
3	Earthworm	+	+	-	-
4	Small lizard	+	-	-	-
5	Termites	++	+	-	-

FIG 6: Feeding of Indian peafowl on different grasses of chidikho

S.N	Feed item	Scientific name	Octob er	Nove mber	Dece mber	Janua ry
1	khus khus	Vetiveria zizanioides	++	+	+	+
2	dhoob	Cynodon dactylon	++	++	+	+
3	drop seed	Sporobolus spp.	+	+	+	+
4	nut grass	Cyperus rotundus	+++	++	+	+

FIG: 7 Feeding of Indian peafowl on different crops near sanctuary

S.N	Feed item	Scientific name	Octo ber	Nove mber	Dece mber	Janua ry
1	Wheat	Triticum aestivum	-	+	++	+++
2	Gram	Cicer arietinum	-	+	++	+++
3	matar	Pisum sativum	-	-	++	++
4	mustard	Brassica juncea	-	+	+++	+
5	cauliflower	B. oleracea var botrytis	+	+	++	++

-=Not feeding
 +=feeding
 ++=average feeding
 +++higher feeding

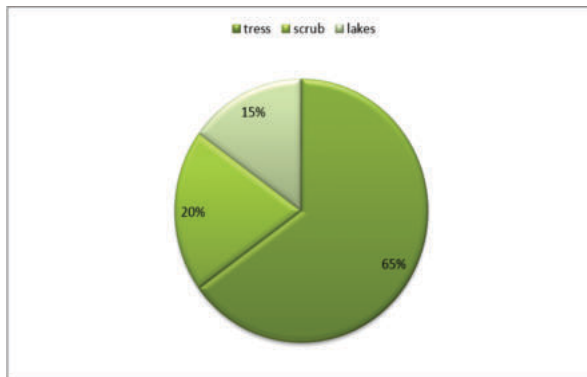


FIG 8 Roosting preference of peafowl's

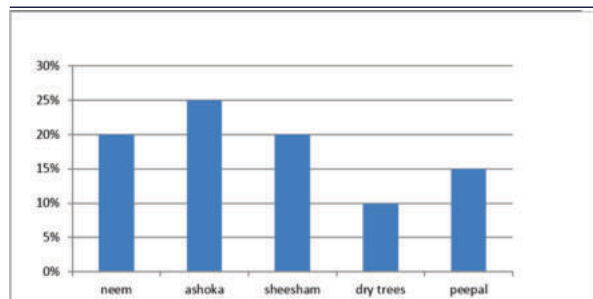


Fig 9: Roosting Trees

THREATS AND CONSERVATION STRATEGIES

Various threats are:

- High extension wires
- Hunting of peacocks for feathers
- Vehicle pollution

Conservation strategies

1. Restricted uses of pollutants near the sanctuary and the habitats of peafowl.
2. Wildlife roads facilities should be available
3. Stopping the increased vehicle pollution created by the visitors of the sanctuary.
4. Awareness program should be conducted for conservation of peafowl
5. Plantation should be done on regular basis.

DISCUSSION

In the present study the male found to be 42% while the female found to be 58% in the sanctuary for this study the study area is divided into three blocks. Block A, Block B, Block C. both the males and females spend more time in feeding but the females spend more time in feeding than males. They are omnivorous they feed seeds, insects, reptiles crops etc but they eat small snakes but try to maintain distance from the larger snakes but at the same time they are very famous for their fighting with snakes.

CONCLUSION

The Indian peafowl is a national bird of India it is also known as blue peafowl and comes in Schedule-I of the Indian Wildlife Protection Act, 1972. This bird is listed as of Least Concern (LC) by the International Union for Conservation of Nature (IUCN). The study was carried out by various methods like scan sampling (Altman, 1973) by watching them from watch tower 1 and watch tower 2 and records the behavior of peafowl in group. Scan sampling is a technique of observing and recording animal behavior with time intervals. Random sampling is considered here because it is a free ranging bird Indirect method of questionnaire survey method is also applied The day to day activity are studied by the process of scan sampling the day was divided into time intervals of 10 minutes the activities like roaming and displaying was carried out for 10 minutes the maximum display activity was performed in Block A. because there is watch tower present near to it so the activities are easily observed by standing on the height. The sex of the each individual of peafowl is identified easily by their neck color, males have blue neck and the females have green neck. Age of the peafowl is determined by the length of the train and its feathers.

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