

A Study on Feeding behaviour of Indian Peafowl (Aves: Phasianidae) in Barabanki, Lucknow

Dr. Shashi Kant

Assist. Prof. Zoology

FAA Govt. PG College Mahmudabad, Sitapur

Abstract

Indian Peafowl (*Pavo cristatus*) is a omnivorous, resident bird, polygamous and widely distributed in India. The Indian Peafowl also known as blue peafowl or common peafowl. They feeds on different parts of plants (such as seeds and fruits) and animals (such as insects, small reptiles and mammals). They liked moist and dry-deciduous forests to live but they can easily adopt in cultivated regions such as agricultural lands, gardens etc. The bluefowl lives in India and Srilanka. Green peafowl is present in Java and Myanmar (Burma). The present study was carried out to assess the feeding behaviour of Indian Peafowl under natural condition at Barabanki, Lucknow, India. The Indian Peafowl lives mainly on ground of open forest, urban habitats, agriculture field, along stream with good vegetation and close to human habitation in semi-feral conditions. It was observed that peafowl spend more time on feeding but at the time of heavy rain mostly peafowl do not like feeding.

Key words: Indian Peafowl, National bird, Feeding behaviour, Distribution

Introduction

In 1963, It was declared that Indian Peafow is a national bird of India, due to its Flagship value found on its glorious position in mythology of world. Peafowl belongs to the family Phasianidae (also known as Pheasant and it is a largest in size among the family Phasianidae) and order Galliformes (Ali and Repley, 1989). Male peafowls are known as peacocks and female peafowls are known as peahens. In India it is given the utmost protection by inclusion in Schedule 1 of wildlife (Protection) Act, 1972. Indian peafowl are polygamous (Ali and Ripley, 1969) and show sexual dimorphism. The peafowl having long train made up of elongated upper tail covert feathers which bear colourful eyespots (Kushwaha and Kumar, 2016). They raised into a fan or grand display during courtship. While the peahens lack the train and dull brown plumage.

The male and female peafowl also distinguished by their neck colour appearance i.e. male recognized by blue neck and female recognized by green neck. It was observed that the preferences of food items by peafowl was depend upon the seasonal crops, scrub vegetation and uncultivated areas. The Peafowl bird is listed in the threatened category of International Union for Conservation of Nature (IUCN) Red List or Red Data Book (IUCN. 2008). Peafowls are omnivorous in nature (Drisdelle, 2007), eating plants parts, flower petals, leaves, fruits (Chopra and Kumar, 2014) cotton fruits, *Acacia* seeds, *Cyperus* rhizomes, standing cereal crop (Johansingh and Murali, 1980), seeds, insects, arthropodes, reptiles, amphibians and small mammals also (Johansingh and Murali, 1980; Sathyanarayana, 2005). They play an important role in regulating the ecosystem balance and functioning. Also they are having religious importance (Thaker,1963; Thapar, 1998). Peafowl roost in groups during night on tall trees, rocks, building or pylons (Parasharya and Mukharjee, 1999).

Classification and distribution of Indian Peafowl

Length of male peafowls (weigh 4 to 6.5 kg.) are 178 to 230 cm. While the length of female peafowls (weigh 2.5 to 4.5 kg.) are only 84 to 100 cm. Peafowl is inhabit throughout of India and other parts of sub-continent (Hanotte et al., 1991). There inhabit areas are near streams, old buildings, grassland, agriculture land, near human population of villages (Ali and Repley, 1989). Classification and distribution of Indian Peafowl are as follows-



Kingdom : Animalia

Phylum : Chordata

Sub Phylum : Vertebrata

Class : Aves

Order : Galliformes

Family : Phasianidae

Genus : 1. *Pavo*

Species : (i). *cristatus* (L. 1758)

(ii). *muticus* (L. 1766)

2. *Afropavo*

(i). *congensis* (Chapin 1936)

The Peafowl is an exotic bird in many parts of the world and it is native of India, Assam, Siam, Burma, Java, Ceylon and Malaya (Kushwaha and Kumar, 2016). Three species of Peafowl are found in different parts of the World (Dharmakumarsinhji and Lavkumar, 1981). (i). *Pavo cristatus*, also known as blue Peafowl or Indian Peafowl, occur in Indian Subcontinent. They are threatened species. (ii). *Pavo muticus*, also known as green Peafowl, found from eastwards to Sumatra. Now they are endangered species. (iii). *Afropavo congensis*, also known as Congo Peafowl or African Peafowl, occur in Belgian, Congo. They are vulnerable species. The breeding season of the Indian Peafowl is not fixed and it may breed any time of the year but they likes rainy seasons for breeding (Munir et.al., 2018). The Peafowl is widely distributed in India sub-continent, from the south and east of the India river, Jammu and Kashmir, East Assam, South Mizoram and the whole of the Indian peninsula (R. Sabesh, 2010). The population is very high in Mathura, Chitrakoot, Rajasthan, Madhya Pradesh, Agra, Kanpur, Sitapur, Lucknow etc. while some districts are reported that population is decline in Lalitpur and Jhansi (Ali and Repley, 1989).

Materials and Methods

The field observation on Indian Peafowl were conducted during the months of July to November 2018. The survey sites included 1.5 km. radius of Barabanki, Lucknow, India in natural condition, which latitude is 26.937834° and longitude is 81.188324° and 113 meters above the sea level. Peafowls were visually observed by binoculars (GOR Standard 10×50). The observations were recorded in the early morning and early evening hours.

Result and discussion

Charlton et al., 2015 and Nowak et al., 2016 studied that insects are good source of protein while plants are enriched in calcium level that is essential for egg production. Johnsingh and Murali, 1980 had mentioned similar findings on feeding association between Indian Peafowl and King crow. Yasmin and Yahya 1996, recorded that Indian Peafowl fed on a mixture of seeds, leaves and wild herbs. Peacocks are omnivorous, ground-feeders that eat insects, reptiles, worms, seeds, grains and fruits (Harikrishnan et al., 2010). Even in their natural range, these birds roam in villages, cities, parks and near human societies in search of food. Sometimes they damage agriculture crops but they also eat locusts, rats small snakes and grasshoppers, which is beneficial to farmers. Animal body has to perform different mechanical activities for which they need energy derived from food (Okoro et al., 2016). Elliott et al., 2014 reported that nutrients are required from food to maintain body structure and growth. Kushwaha and kumar (2016) observed that Indian Peafowl preferably roosted on top of the tall trees so that they could get vision from all directions and they generally selected the tallest trees for roosting in order to protect themselves from the free climbing, night predators such as the leopard and other cats. Also worked on diet preferences and general behaviour of peafowls in captive environment by Praveen et. al., 2018. In the present study, It was observed that female peafowl spend



more time on feeding than male but at the time of heavy rain mostly peafowl do not like feeding and also noted that they feed on grains so known as granivorous and because in the agronomic ecosystem they mostly feed on paddy (Sathyanarayana et al., 2005). In 1981 similar observations were recorded by K. Navaneethakannan were noted that Peafowl spend maximum time in feeding activity in comparison to other activities. In 2010 Jones and Dawkins reported that female Peafowl spent most of the time in feeding, moving, resting, guarding and other behaviour. Ali and Ripley (1983) had reported that large birds used tall trees and small birds need small trees for roosting. The variety of food is required in captive environment for birds as recommended by Central Zoo Authority (Raja, 2007) and 30 gm. Bread, 30 gm onions and garlic, 100 gm spinach, 60 gm oil seeds and small insects, worms and animals in captive conditions (Sikandar et al., 2015). Junaid Naseer et al., 2018, investigated that major portion of faecal contents were of plant materials as compared to animal contents. Small size pieces of the sand and gravel (known as non-food materials) were seen in the faecal matter that help in improvement of their digestive system. Previous studies showed that more than 32% of faecal contents were composed of non-food items (Trivedi and Johnsingh 1995). In this study, Indian Peafowl were observed to feed on leaves, flowers and fruits of different plants such as wheat, matar, paddy, mustard, bathua, pear, pilkhan, maize, carrot, tomato, cucumber, watermelon, brinjal, potato etc., also like to feed on small animals like ant, earthworm, lizard, snake, beetles, termite etc and they would like to eat seasonal grains, fruits, vegetables, crops etc. Similar kind of observation also recorded by Kaur and Kler in 2017.

References

- Charlton, A., Dickinson, M., Wakefield, M., Fitches, E., Kenis, M., Han, R., Zhu, F., et al. (2015). Exploring the chemical safety of fly larvae as a source of protein for animal feed. *J. Insects Food Feed.*, 1: 7-16.
- Elliott, K. H., Vaillant, M., Kato, A., Gaston, A.J., Ropert Coudert, Y., Hare, J.F., et al (2014). Age related variation in energy expenditure in a long lived bird within the envelope of an energy ceiling. *J. Anim. Ecol.*, 83: 136-146.
- Junaid Naseer, Anjum, K.M., Munir, M.A., Nazir, M.A., Yousaf, M.Z., Naseer, O., Anjum, A., Khan, A. U., Akbar, M.T., (2018). A study on Indian peafowl (*Pavo cristatus*) emphasizing breeding season and feeding behaviour in captivity. *Indian J. Anim. Res.*, 52(11): 1664-1666.
- Nowak, V., Persijn., Rittenschober, D. and Charrondiere, U.R. (2016). Review of food composition data for edible insects. *Food Chem.* 193: 39-46.
- Okoro, V., Nwokeocha, A., Ijezie, C., Mbajiorgu, C. and Mbajiorgu, E. (2016). Effect of varying dietary supplemental inclusion levels of onion and garlic on semen quality characteristics of Hubbard white breeder broiler cocks aged 35-41 weeks old Indian *J. Anim. Res.*, 50: 922-929.
- Sikandar, S.K., Ali, Z., Nemat, A., Ahmad, S., Hussain, Z., Saleem, K. and Khan, M.N.,(2015). Diet provision for zoo animals in captive conditions of Lahore Zoo, Pakistan. *J. Anim. Plant Sci.*, 25: 493-499.
- Munir, M.A., Yousaf, M.Z., Naseer, O., (2018). A study on Indian Peafowl (*Pavo cristatus*) emphasizing breeding season and behaviour in captivity. *Indian J. Anim. Res.*, 52(11): 1664-1666.
- Praveen, Z., Sidra, S., Khan, N.B., (2018). Diet preferences and general behaviour of Peafowls in captive environment. Vol. 33(1): 16-21.



Kaur, S., Kler, T. K., (2017). Feeding habits and roosting preferences of Indian Peafowl (*Pavo cristatus*) in Ludhiana Distt. (Punjab). Journal of entomology and zoology studies, 5(4): 1693-1696.

Kushwaha, S. and Kumar, A., (2016). A review on Indian Peafowl (*Pavo cristatus*) Linnaeus, 1758, Journal of wildlife research, October-December, Vol. 4 issue 4, Pages 42-59.

Chopra G and Kumar T (2012). Study of feeding and roosting sites of Blue Peafowl, *Pavo cristatus* Linnaeus, 1758 in district Kurukshetra, Haryana (India). Journal of Biological and Chemical Research, 29(2): 273-282.

Harikrishnan, S., Vasudevan, K., Sivakumar, K. (2010). Behaviour of Indian peafowl (*Pavo cristatus*) Linn. 1758 during the mating period in a natural population. Ornithol. J., 3: 13-19.

Jones, T.A. and Dawkins, M.S., (2010). Effect of environment on Pekin duck behaviour and its correlation with body condition on commercial farms in the UK. Br.Poult. Sci., 51: 319-325.

IUCN. (2008). *Pavo cristatus*. In: Red List of Threatened Species, IUCN.

Drisdelle G. (2007). Living with peafowl, dedicated to quality service, City of Dunedin. Florida.

Raja, A., (2007). Zoos in India. Central Zoo Authority, India.

Sathyanarayana M.C. (2005). Impact on the Indian Peafowl (*Pavo cristatus*) on agricultural Ecosystems, Envis Bulletin, wildlife and protected areas, 175-176.

Parasharya BM and Mukherjee A. (1999). A roosting behaviour of Indian Peafowl *Pavo cristatus*. Journal of Bombay Natural History Society. Vol. 96(3): 471-472.

Thapar V (1998). Land of the Peacock: A natural history of the Indian subcontinent. University of California Press.

Sabesh R (2010). The Peacock our national bird. Eco News, 16(2): 5-7.

Yasmin S, Yahya HAS. (1996). Feeding habits and crop damage by Indian Peafowl. World Pheasant Association. 2: 8-9.

Trivedi, P. and Johnsingh, A. (1995). Diet of Indian Peafowl *Pavo cristatus* Linn. Gir Forest Gujrat. JBNHS 92: 262-263.

Hanotte, O., Burke, T., Armour, J. A. (1991). Hypervariable minisatellite DNA sequences in the India peafowl *Pavo cristatus*. Genomics., 9:587-597.

Ali S, Ripley SD. (1989). Handbook of the birds of India and Pakistan. Second edition. New Delhi: Oxford University Press.

Ali S, Ripley SD. (1983). Handbook of the birds of India and Pakistan. Compact Edition, Oxford University Press, Mumbai.

Dharmakumarsinhji RS and Lavkumar KS (1981). Indian peafowl, Sixteen Indian birds, Publication division, Ministry of Information and broadcasting, Government of India, 24-28.



Navneethakannan K. (1981) Activity patterns in a colony of peafowl (*Pavo cristatus*) in nature. Journal Bombay Natural History Society. 81(2): 387-393.

Johansingh, AJT and Murali, S (1980). The ecology and behaviour of the Indian peafowl (*Pavo cristatus*) Linn. Of Injar. Journal Bombay Natural History Society, 75(3): 1069-1079.

Ali S, Ripley SD. (1969). Handbook of the birds of India and Pakistan. Vol III. Oxford University Press, Bombay, India.

Thaker JP (1963). Peacock: the national bird of India. Journal of the Oriental Institute, Baroda. Journal of wildlife and research. 4: 42-59.