Chapter - 6

Summary
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The Ecology of Indian Blue Peafowl across three study areas viz., Bankapura, Adichunchanagiri and Jogimatti was investigated as there is little quantitative information documenting the lifecycle. The peafowls were observed for Selection and Utilization of habitat, this was undertaken through the recording of foraging observations whilst walking along fixed transect routes included in the habitats. Transects with 200mt length and an open width of 100mt were set. Peafowls inclined to use areas containing more dense thorny shrubs (*Capparis* sp., *Lantana* sp., *Zizyphus* sp.), more frequently than areas with Shrubs without thorns or deciduous tree species in 2007. Cultivated trees and concrete areas (roads) were strongly avoided. The most important habitats regarding utilization were grass and irrigated lands in 2007 and shrubs and trees in 2008. Peafowls seemed to be an opportunistic species with home ranges likely to be fairly small or larger, they utilize all habitat.

Food composition was examined by breaking open fresh dry droppings. The remains were observed and noted in the form of frequency on their occurrence. Fresh dropping contents were washed through a fine sieve dried on blotting papers sorted and was preserved in 70% alcohol for further identification. From the overall observations it was assessed that peafowl preferred primarily Paddy (*Oryza sativa*) as their bulk food and secondarily the finger millet (Ragi)
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and then the Jowar (*Sorghum vulgare*). Scat analyses encountered animal matter viz., Antenna- Millipedes and Ants, heads - Beetle and Aphids, Wings - dragon flies, butterflies and mantids, Chelicerae or pedipalp - Aracnae, Vertebra - Frogs, lizards or snakes From the pattern of feeding and scat analysis, it can be concluded that more than 44% of food accounted from Agricultural plant matter, 39% accounted from natural floral sources and 17% from faunal sources.

For roosting pattern in peafowls, the tree species and total number of trees in each species in each habitat site were recorded. The peafowls at each roosting site are counted at dusk or dawn over a seasonal parameter. *Acacia nilotica* was the usual roosting site followed by *A. ferruginea, Capparis* and *Tamarindus* in Bankapura; whereas in Adichunchanagiri, *Ficus, Mangifera, Bauhinea* and *Leuceana* had a good canopy cover and protection. The communal roosting in bamboo trees was observed in Jogimatti while *Prosopis, Lantana* and *Capparis* sp. are also preferred by peafowls.

For quantifying the call types, seasonal observations were conducted in one study area at Bankapura 2007-2009 on a large feral population of Indian peafowl. To test the seasonality of calling, the number of notes of each call type recorded per day during the breeding season (April through June) was compared to the number recorded in the non-breeding season (July through March) with a tally (frequency data) from every 3 hr, 6 hr (06:00-09:00 hr to 15:00 – 18:00 hr). Six different call types were identified. Based on this data, three of the male calls,
keow, Eow and the hoot-call appear to be particularly important for peacock breeding. “Eow” the most common male call, seems to be used for ordinary vocal contact, Keow appear to be advertisement call and more frequent call for females to locate males, Kokakk was a strong signal call, khokk call was observed by sub adult females while grazing, “Bu pee” call work more effectively at closer assemblages of female with chicks and “hoot – dash” followed immediately after mating.

During the year 2007-2009 survey was undertaken in all the three study areas including various habitat zones. A census visit (transect survey) constituted six observer hours a day, two people undertaking the census together for three hours each day between the hours of 06:00 and 09:00 (all times are IST). Bankapura had a mean population with Males-258 and Females-690. In Adichunchanagiri it was 96 and 226 respectively and in Jogimatti, the population is at higher density 124 and 433. The high mound and deep trenches of the land have provided a perfect home for these birds, the variations and crop pattern distribution and total prohibition on human interference support a good population.

The breeding males were observed, males form the territory and leks. The male utters the “Keow” call again and again until a female gets visible in his sight, in front of a female the cock then vocalizes with a loud squawk performs a type of courtship dance facing a female in Late summer. During mating the train is
lowered and mounting occurs in the usual galliform manner, males mate with 2-3 peahens. Peahens built nest using dried grass intermingled with small dry twigs of *Prosopis*, the *Capparis* bushes with a tuft of spines effectively proved to be the greatest protection for these birds from any predators. Peafowls even built nests in a slightly hollow scraped in the ground in a well-hidden situation in dense shrubby; often in an isolated patch of bushes growing among long grass. The eggs were glossy, pale, buff, thick-shelled and pitted, and they measured about 69 x 55 mm approximately.