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Short Communication

Utilization Of Mobile Tower, High Tension Tower And Electric Pole By Indian Blue Peafowl (*Pavo cristatus*) in Rajasthan State

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The man-made structures such as High Tension and Mobile communication towers, Electric poles and buildings were utilized by birds for nesting, perching and resting. It is known that the electric poles and towers provide attractive roosts for birds when no trees are found. Gebring *et a.l* (2011) have reported that the communication towers such as cellphone towers, television and radio broad cast towers and public safety communication towers have resulted in avian fatalities. Number of scientists (Braaksma,1966; Renssen *et al* ., 1975; Gylstorff, 1979; Hoerschelman *et al* ,1988; Bevanger, 1994 ; 1995) stated that the annual death of birds worldwide through electrocution, collision with power lines and other types of overhead wires is an example of a poorly understood mortality, although it was observed and commented on for more than one hundred year. It has been reported that several gallinaceous species were known to suffer losses because of flying into overhead wires. The interaction of birds of flight with man-made obstacles such as transmission lines should be considered as the factors causing the death of the birds(Leopold,1931; Borel,1939; Krapu,1974;Rose and Baillie,1992).

On 14th May 2012 one adult male Indian Blue peafowl, standing on a electric pole

was sighted by one of the authors at Kayad village, Ajmer,Rajasthan. The peacock used this pole during evening hours before going to roosting tree in order to have a clear visibility and to communicate with the other individuals of its family. A group of nearly 30 peafowl roosting on High Tension Tower installed in between Didwana and Sri Ganga nagar, Rajasthan Highways (Fig.2) was sighted by one of the authors.. At Didwana, Rajasthan an another author observed a peafowl roosting on the top of a mobile tower (Fig 3). The authors have not sighted any peafowl killed by electrocution .Further there is no report with regard to killings caused due to electrocution.

Dodia (2011) observed the usage of High Tension line, electric pole, the tower of the temple (Sikhar) and telephone antenna pole for roosting by peafowl at Bhavanagar district, Gujarat. He reported that even though trees are available, the peafowl preferred high tension electric pole. Parasharya and Mukherjee (1999) opined that roosting of peafowl on electric pole indicates adaptability of the species to a modified habitat. Dodia(2011) reported that the local people said that the birds were not free from danger of electric pole due to electric shock and atleast one bird was died per year. He opined that the 50-60 feet height of the electric pole is the only factor which is responsible for roost selection.

Bevanger(1998) reported 321 individuals of Galliformes belonged to 7 Genera and 9 species as victims of collisions with power lines . Bevanger (1998) suggested that the species with high wing loading and low aspect, ie., the 'poor' flyers deserve to be classified in a high risk group as regards to collisions with power lines. The 'poor' flyers are characterized by rapid flight, and the combination of heavy body and small wings obviously restricts swift reactions to unexpected obstacles.

According to Bhavanger (1998) the electrocutionf birds is a simpler problem than collision. It may take place when a bird touches two phase conductors or one conductor and an earthed device simultaneously , especially when the feathers are wet. Hence, body size and behavior, such as perching and roosting on poles or wires, are the keys to understand as to why and how birds getelectrocuted. If the wings of bird simultaneously contact a transmission line and another object such as an adjacent wire, support tower or tree, the resulting electrical short circuit can kill the bird and also damage the electrical conductor. The large birds are more susceptible to such incidental contact, electrocution hazard disproportionately affect large bird species such as raptors.

A bird sitting on a single strand of wire and no part of its body touching another wire would provide no return path for the electrical current mainly because it's wings will only touch one wire. The wire is not neutral. It is live. Birds do not get electrocuted because they are not connected to earth and therefore do not complete a circuit through which the electricity can flow. The birds do not get electrocuted because they are not grounded and the electric channel is not complete. For electrical current to flow the circuit needs to go to ground and since these birds are only touching the live wire, there

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is no flow of circular current through their bodies. And their body does keep them warm.

Although telephone wires are low voltage and insulated to receive a shock the current has to pass through the bird to earth, so the bird would have to be in contact with a live wire and another conductor that is earthed.

The mobile telecommunications have been spreading across the urban centres. These base stations have increased the electromagnetic contamination "electrosmog" in the urban centres. The fundamental reason is that these devices produce 900 for analog and 1800 MHz for digital transmission pulsated waves that interfere in the nervous system of living beings.

There are reports (Alfornso,2003) that the plumage of the birds are unflattering , run down and dull coloured. This not only occurred to ornamental birds such as peacocks but also to wild birds such as tits, great tits, house sparrow, etc..

Alfornso (2003) has rightly stated that the electromagnetic field is the perfect secret agent: you cannot see it, you cannot smell it, you cannot hear it, you cannot feel it and its effects are slow but relentless.

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