Conserving the Egyptian Vultures, the silent warriors of Nature: A Conservation research study

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The Egyptian vulture, *Neophron percnopterus*, is a medium sized scavenger and are globally endangered according to IUCN Red List of Threatened Species. Diclofenac is responsible for the mass decline in the number of vulture species in general but in case of Egyptian vultures no specific effect of Diclofenac has been reported or proved so far. They are the most handsome, smartest and intelligent vulture species. Handsome because it is definitely not like common people's stereotype of a vulture. Vultures are nature's own clean-up crew that provide irreplaceable ecosystem services such as waste removal, nutrient recycling and decreasing the risk of disease transmission. Their extinction would cause a permanent imbalance in Ecosystem. The name, Egyptian Vulture is named as because they are considered very important in Egyptian mythology. The ancient Egyptian tribes considered them as the symbol of purity and motherhood. They were considered sacred and protected by the Pharaoh's and hence also known as the, "Pharaoh's chicken". The ancient Egyptians had the intimate connection with nature.

There are two subspecies of Egyptian vultures in India, *Neophron percnopterus percnopterus* and *Neophron percnopterus ginginianus*. Both the subspecies are reported in Uttar Pradesh.

One of the most unique features of Egyptian vulture is that, it is the only tool using vulture Therefore, considered as the most intelligent and smarter than other vulture species. Being an opportunistic feeder with a broad diet range, not only devouring carcasses of dead animals, but feeding on most types of offal or garbage. It has even been observed that farmers as they plough up the ground, the worms, grubs, and similar creatures that are disturbed comes on the surface and the Egyptian vultures feed upon them. It can feed upon whatever it gets and sometimes scavenge small mammals, reptiles and insects also. Maximum number of Egyptian vultures have been observed around slaughterhouses and bone mill factories where they feed upon crushed bones. They are social in behavior at the predictable sources of food and communal roosting sites and co-exist with other species like Black Kite (*Milvus migrans*), House Crow (*Corvus splendens*), Cattle Egret (*Bubulcus ibis*) and Dog (*Canis sp.*).

They prefer feeding along with other birds. It enhances their foraging success and also protects them from predation. The communal roosting sites have been observed at Sambhal, Lakhimpur-Kheri, Aligarh, Bareilly and Faizabad.

It breeds once a year. Breeding season starts from March to June. The nesting is generally in the vicinity of human dwellings, utilizing the different nest materials from the surrounding. The nests are made on ancient temples, trees, electricity pylons, water tanks etc. Nests are often reused. Nest site selection was assessed on the basis of characters of the selected and non-selected substrates.

The nest material selection study was also done during the study period. The nest of Egyptian Vulture is an open, broad, elliptical shaped and loosely built platform type. In the study, anthropogenic matter constituted the maximum percentage which shows their link with human beings, followed by Animal matter, Plant matter, Soil and other unidentified materials. During the nest building process, the hard and sharp materials appeared to be the most effective material for the protection of nest. The mesquite sticks and bones were decorated as a host defence. The data also allow postulates a hypothesis that Egyptian Vultures are able to distinguish between materials based on physical and mechanical properties and thus selective in their use for nest construction.

During the entire study, the major threats reported were, lack of awareness, closure of slaughterhouses, myths, electrocution and increased population of feral dogs. Mass awareness campaigns were also initiated time to time and maximum number of individuals were sensitized. The prominent breeding territory is being monitored actively and the local people(villagers) from the particular village are educated regarding the importance of species and therefore acting as a frontline volunteer for the conservation of active nests in the breeding territory. Mass awareness regarding conservation of Egyptian vultures at various levels has been done, through workshops, census, interactive programs at local level; publication and distribution of awareness material in local language and its distribution in schools and colleges; rescue operation for injured or dehydrated vultures; workshops and awareness programs involving every level of community.

I have also been invited as the key speaker at the workshop organized by DFO Bahraich to deliver an expert talk on Egyptian vulture among the Forest officials at Katerniaghat Wildlife Sanctuary, Uttar Pradesh.

As the study area was large and it was a challenging task to do a study which has no previous baseline data but as it has been rightly said by Nelson Mandela, that, "It always seems impossible until it's done". I have strong faith in Almighty and therefore I worked hard to achieve my goals during my study and I got rewarded positively. I have presented my work done on conservation of Egyptian vultures in Uttar Pradesh, India, at several national and international platforms and was awarded with William C. Andersen Award for the best poster presentation at the Annual conference of Raptor Research Foundation, at Kruger National Park, South Africa in 2018 and James Koplin award for the oral presentation at the Annual conference of Raptor Research Foundation held at Fort Collins, Colorado in 2019.In both the conferences there were delegates from around 52 countries of the world and I was the only Indian among them. It was a proud moment for me to represent my country for my work and being appreciated and awarded both the times. Everybody appreciated for my work.

During the prevalent pandemic period of COVID-19, I have delivered several virtual talks on different occasions of green calendar such as, International Vulture Awareness Day, International Day for Biological Diversity, World Environment Day and in other certificate courses by colleges, to keep myself connected with my work and to disseminate the information with students, emerging researchers and other common people.

The present study will provide the baseline data to plan for the effective conservation strategies for Egyptian vultures.



Figure 1: Mass awareness among local people during field work



Figure 2: Awareness at Kasturba Girls College



Figure 3: As a Key speaker at Workshop organized by DFO Bahraich at katerniaghat Wildlife Sanctuary, among Forest officials



Figure 4: Workshop organized by DFO Bahraich at katerniaghat Wildlife Sanctuary, among Forest officials

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