

Why do Birds Matter to Us - A Perspective from Kashmir Valley, India in Light of Declaration of 2018 as the Year of Birds?

Khurshid Ahmad Tariq

Department of Zoology, Islamia College of Science and Commerce, Srinagar-190002, Kashmir, India.
drkatariq@gmail.com

ABSTRACT

The year 2018 has been declared as the *Year of Birds* with the aim of celebrating and protecting them. Birds are mysterious, cheerful and a marvellous creation with some unique and peculiar features. They are ecologically crucial in maintaining the balance of many ecosystems by sustaining various food chains and energy cycles. With their colourful bright plumage they enrich the natural scenic beauty of earth. Their migration, foraging, singing, breeding and nesting behaviour is quite astonishing. Birds make a variety of calls, sounds and songs with a language as complex as any spoken words that have many meanings, purposes and uses. Birds are the indicators of climatic conditions, natural calamities and bio-indicators of potential human impact and environmental degradation. Birds are facing continuous natural and anthropogenic threats due to multiple problems in the environment. The unregulated and unsustainable tourism and poaching threatens the habitat of so many game birds. Climate change, chemical use, loss of food source, overharvesting are the other impacts on bird loss. Awareness about stopping of habitat destruction, indiscriminate poaching of birds, and regulated bird watching is the need of the time. We need to use more resources and put more sincere efforts for their management and conservation in view of the changing environment. Climate change has already altered the biological life on this planet, it would be interesting to know how climate change threatens bird's life and survival. That will enable us in true sense to fulfil the objectives of the year of birds.

Keywords: Birds; Behaviour; Climate Change; Conservation; Ecotourism; Habitat; Year of Birds

1. Background

Why birds matter reads the January 2018 issue of the US National Geographic Magazine with a fascinating quote on its cover page "*it is not just what birds do for the environment-it's what they do for our souls*"^[1]. This statement conveys million dollar message and does not express their biology only but vindicates philosophy behind bird's life and their association to human life. Therefore, we humans may be the centre of our universe but we are not the centre of their beautiful world.

The year 2018 has been declared as the Year of Birds (with the aim of celebrating and protecting them) by the U.S. National Geographic Magazine (NGM) in collaboration with National Audubon Society (NAS) and Cornell Lab of Ornithology (CLO) to commensurate the 100th anniversary of the signing of the Migratory Bird Treaty Act (MBTA)^[1]. Briefly the MBTA was passed by the US Congress in 1918, which officially makes it a crime to "*pursue, hunt, take, capture, kill or sell*" a migratory bird or its "*nests, eggs and feathers*". Simply it is a law that protects birds from people. The convention of 1916 between the U.S. and U.K. for protection of migratory birds resulted in the inception of MBTA of 1918^[2]. Since then it has been amended many times to include more prohibitions and regulations. As per the NGM target set for the celebrations during the year, the year 2018 will be full of stories, maps, books, events and campaigns on social media as a part of celebrations.

2. Introduction

Birds are quite diversified and have adapted to live at all levels within the tree ecosystems, from the topmost

waving branches of the trees to the land floor. During the course of their evolution, some birds (ratitae) have lost the capability of flight independently as a means of remarkable adaptation. Birds are mysterious and a marvellous creation with some peculiar features and are a rapidly growing ecotourism industry (avitourism)^[3]. Bird watching is an economically and culturally significant field emerging in the world.

The natural aerodynamic design of birds has always fascinated man and has in fact enabled us to invent aircrafts, air buses and other man made flying objects. Biologically, they are Aves, warm blooded vertebrates, devoid of teeth, have variously modified beak, have an average body temperature of 41 - 42°C, bear wings and feathers, have four chambered heart, have sharpest vision, internal global positioning system and deep power of smell especially in migratory birds who can smell even the trees-the olfactory navigation^[4].

Concrete information about the life expectancy of birds is not known. Birds generally don't live long. However, research has shown, if a bird survives accidents, diseases, predation, migration hazards and starvation, they may live a surprisingly long life. Many birds mainly Albatross have been found living an age of around 40 years or more. Life expectancy in birds is closely correlated with size -- the larger the species, the longer it is likely to live^[5].

Birds are quite strategic and some birds especially ground foragers (shore birds, game birds, thrushes, sparrows, etc.) are hardly noticeable in nature due to camouflage to protect themselves from enemies and environmental harm. Beautiful among birds are also the parrots with historical and cultural significance. Having phenomenal gift of speech as extreme as playing songs (especially among the African parrots), they have always wondered human. The cognitive and social behaviour of birds is remarkable and *Corvids* (crows, ravens and magpies) are known for their social adaptability and are the most intelligent among birds on this planet^[6]. Many bird species are going extinct at a very fast rate due to numerous natural and anthropogenic pressures. This paper is a general overview of birds with emphasis on their importance to man and nature and the conservation efforts for their protection.

3. Why birds matter (significance)

Birds have ecological, cultural, social and economic importance for us. Birds are a cheerful, wonderful, beautiful, magical, vibrant, majestic and a playful creation. With their colourful bright plumage they enrich the natural scenic beauty of earth. Their migration, foraging, breeding and nesting behaviour is quite astonishing.

Birds are an important component of wildlife along with mammals, butterflies and plants. They are ecologically crucial in maintaining the balance of many ecosystems by sustaining various food chains and energy cycles.

Some birds have a worldwide nutritional importance as a source of protein rich food (eggs, meat) for human. In the traditional medicine, the breast meat of certain birds is preferentially given to chronically ill people to rejuvenate them. The down feathers are put to many industrial uses like manufacturing of pillows, quilts, sleeping bags, etc. Besides the goose down feathers are used in the manufacturing of warm outerwear (jackets) in the cold climate zones of the world.

Birds are the indicators of climatic conditions and are the good indicators of natural calamities and even minor environmental disturbances like stream degradation. Birds are acting as bio-indicators of potential human impact, pollution and environmental degradation, therefore, they are natural agents measuring the ecosystem health^[7].

Some birds (thrushes and members of crow family, etc.) and few plant species have evolved a symbiotic relationship. For example, fruit eating birds act as efficient pollinators (bird droppings as seed dispersal agents) under natural system particularly in tropical climates.

Birds are the natural cleansing agents of our environment. They eat the seeds of some weeds, therefore, are natural agents of weed control. Birds act as an efficient biological control agents by feeding on various agricultural pests (rodents, mosquitoes, beetles, moths and other insects).

The excreta of birds being rich in uric acid (easily convertible to ammonia-source of nitrogen) is very important as a good source of manure. Similarly, guano (droppings) from seashore birds are a great source of nitrogen for agriculture.

Pet birds like pigeon, parrot, etc. are a popular choice among the people as a means of luxury and leisure time. Bird watching is an important hobby in the world and are becoming part of a rapidly growing ecotourism industry. Therefore,

they deserve to be treated with honour by devoting a full year for them to know further and to devise measures for their protection.

4. Bird sounds-connecting us to nature

Birds make a variety of calls, sounds and songs with a language as complex as any spoken words that have many meanings, purposes and uses which only birders (bird watchers) can perceive and understand^[8]. Their beautiful songs are a source of natural melody to us, although for them it is the main form of communication among sexes and different members for defending territory or signalling alarm. Our environment is bustling with bird's melodious songs. We are well aware about the melodious early morning chirps. Imagine for a while, in which that bird song outside our houses fails to return one spring-what should be our feeling. They are the nature's best play back singers and artists, their singing behaviour and nest construction is itself an art ponderable. Their songs are relaxing and assuring, watching and listening to birds enlighten our thoughts to see the world from non-human perspective.

The mountains echo with bird songs, the valleys and gardens blossom filled with bird chirps is always enchanting. Bird songs and sounds particularly of bulbul, sky lark, nightingale, etc. have found their place in poetic world also. Bird songs are nature's alarm clock, with the dawn and dusk chorus signalling, designating the start and end of the day, stimulating us cognitively. Bird songs relax people physically and stimulates mentally, reducing stress and anxiety. That is why in hospitals in most parts of the world, bird songs are played prior to surgical procedures to reduce stress and anxiety. The melodious songs of birds have restorative effects and research has shown that bird songs are very effective to combat depression and heart problems.

5. Migratory birds visiting Kashmir valley, India

Some birds don't leave their original areas (resident) while others migrate in search of food, breeding and suitable climate. The migration patterns and navigation skills of birds are awesome. They have remarkable navigation skills including homing (return to same area after migration) instinct which has always fascinated humans. Birds even sense the strength of earth's magnetic field to feel the migratory direction. They have several different inbuilt compasses to guide its flight. Birds visualise and recognise even the landmarks like mountains, rivers, etc. to navigate from one geographical region to other.

There are about 9,000-10,000 living species of birds on earth. Out of these estimated species, around 13% are found in India. Kashmir valley is a home to around 262 species of birds including resident and migratory birds (summer and winter visitors) out of the total of 358 species recorded from J&K State^[9].

Thousands of migratory birds arrive in Kashmir valley from October to February each year from Central Asia (Kazakhstan, Uzbekistan, Tajikistan, etc.), some countries of Eastern Europe (Russia, Poland, Hungary, Romania, Bulgaria, Serbia, etc.), Siberia, China, Japan, Philippines and other regions of the world to overwinter under the shadows of majestic snow clad Himalayas. While most birds arrive to avoid freezing temperatures in their native extreme cold habitats like of Siberia, some birds like the Mallards arrive to breed as well. They need to be ensured safe and poaching free survival so as to let them migrate back cheerfully in late spring and pre summer with a blessed load of new generations.

Kashmir valley has a rich diversity of wetlands including Hokersar, Haigam, Shalbugh, Narkara, Manibugh, Chatlam, Mirgund, Wular, Dal, Anchar and other marshy lands. Hokersar and Wular are the Ramser sites. However, most of their area is lost now either due to concrete constructions or pollution. Important migratory birds visiting Kashmir wetlands and water bodies during winter are generally ducks and geese. Few examples are: Common Teal (*Anas crecca*), Northern Pintail (*Anas acuta*), Mallard (*Anas platyrhynchos*), Common Pochard (*Aythya farina*) and Red-Crested Pochard (*Rhodonessa rufina*), Brahminy duck (*Tadorna ferruginea*), Tufted Duck (*Aythya fuligula*), Gadwall (*Anas strepera*), Greylag Goose (*Anser anser*), Eurasian Wigeon (*Anas penelope*) and Northern Shoveler (*Anas clypeata*), etc. However, unfortunately we have lost the vast feeding and breeding areas for these visitors due to the rapid conversion of agricultural land into residential areas and devastation of wetlands. This has been the main reason behind

depletion of suitable habitats for their sustenance and has resulted in the decline of their populations and diminished species richness.

6. Habitat loss, threats and conservation

Birds are facing continuous threats due to multiple problems in the environment both natural and anthropogenic. Many birds have already become extinct from the planet. About 12% out of 10,000 species of birds are extinct. The development and industrialisation like power lines, use of dangerous pesticides, wind mills, etc. are the major factors responsible for their mortality. In Kashmir valley, due to change in life style and culture many bird species like house sparrow (*Passer domesticus*), Himalayan bulbul (*Microscelis psaroides psaroides*), house crow (*Corvus splendense*), dove (*Streptopelia decaocto*), swallow (*Hirundo rustica*), common myna (*Acredotheres tristis*), pigeon (*Columbia livia*), etc. have lost their nesting sites within or near our houses. Once they enjoyed huge populations in the diversified habitats of Kashmir valley, now they are represented by declining populations. The collection of bird eggs and poaching are the other great problems behind the decreasing populations of various birds. The unregulated and unsustainable tourism threatens the habitat of so many game birds. We need to protect and safeguard their habitats and other dwelling areas. Awareness about ecology of birds, stopping of habitat destruction, indiscriminate poaching and killing of birds is the need of the time to protect this valuable treasure.

Our state bird, Black Necked Crane (*Grus nigricollis*) is critically endangered (vulnerable) due to habitat alteration and indiscriminate poaching^[10]. The necessary protective and conservation measures should be enhanced to safeguard its spectacular life. We have also been witnessing the declining population of the Himalayan Griffon Vulture (*Gyps himalayensis*) which inhabits high and low mountainous regions in the Kashmir valley and parts of China, Nepal, Bhutan, Afghanistan, Central Asia and Pakistan^[11]. It has been recently placed in the IUCN red data book of threatened species and the greatest threat for it has been identified-the diclofenac drug used in livestock. Similarly, Himalayan Snow Cock once considered of large distribution range in Kashmir valley is also showing visible decline in their population.

The Overa-Aru Wildlife Sanctuary is one of the most important protected areas of the J&K State and is the habitat of different species of birds during different seasons^[9]. The Hirpora Wildlife Sanctuary and Dachigam National park are also known for the important avifauna. Overall, habitat loss due to development is a greatest threat to birds like other wild animals. Climate change, chemical use, loss of food source, overharvesting are the other impacts on bird loss besides habitat destruction and alteration^[12]. We need to conserve bird visiting areas and to establish more bird conservation areas and sanctuaries in Kashmir. Sites with high diversity of birds (important bird areas-IBA) are significant from conservation point of view. Special attention should be paid to issues like bird watching and monitoring and management of bird areas and habitats so as to achieve the conservation of bird species.

Various measures are already being taken at international, national and state level for the bird conservation. Multiple government and private organisations are very active throughout the world in the field of bird management and conservation. Studies are being conducted for monitoring populations of important bird species and their habitat for efficient conservation. Important habitats of birds, including migratory birds, have been notified as Protected Areas under the Indian Wild Life (Protection) Act, 1972 and J&K State Wild Life (Protection) Act, 1978 for the better conservation, management and protection of birds and their habitats. The J&K state under the British control had already created Game Preservation Department under Game Preservation Act, 1942 to protect and preserve the Game animals in the state^[13].

7. Conclusion

We need to use more resources and put more sincere efforts for their management and conservation. Studies need to be carried out to examine how the changing environment is impacting birds. We must remember birds and their songs are the reason connecting us to nature. Climate change has already altered the biological life on this planet and is an established fact now, it would be interesting to know how climate change threatens bird's life and survival. That will enable us in true sense to fulfil the objectives of the Year of Birds-2018. Let us pledge to safeguard, protect and honour

them.

References

1. Franzen J. 2018. Why birds matter. The National Geographic Magazine. January issue, 2018. www.ngm.com
2. Martin JC, Nathanson KL, Bordelon S, 2016. The migratory bird act: an overview. www.crowell.com
3. Ocampo-Penuela N, Winton RS. 2017. Economic and conservation potential of bird-watching tourism in post conflict Colombia. Tropical Conservation Science. <https://doi.org/10.1177/1940082917733862>
4. Goodenough, J. (2001). Perspectives on Animal Behaviour. John Wiley & Sons
5. Ehrlich PR, Dobkin DS, Wheye D. How Long Can Birds Live? <https://web.stanford.edu>
6. Emery NJ. 2006. Cognitive ornithology: the evolution of avian intelligence. Philosophical Transactions of the Royal Society B: Biological Sciences, Jan 2006
7. Larsen, S., Sorace, A., & Mancini, L. (2010). Riparian bird communities as indicators of human impacts along Mediterranean streams. Environmental Management, 45 (2), 261-273.
8. Mayntz M. 2017. What type of sounds do birds make? <https://www.thespruce.com>
9. Khah SK, Rao RJ & Wani KA. 2012. Studies on bird diversity of Overa-Aru Wildlife Sanctuary of Jammu and Kashmir, India. Journal of Threatened Taxa 4(13): 3228–3232.
10. Lhendupp P and Webb EL. 2009. Black-necked Cranes *Grus nigricollis* in Bhutan: migration routes, threats and conservation prospects. FORKTAIL 25: 125–129
11. Awan MS, Minhas RA, Ahmad B and Khan AA. 2017. Impact of habitat qualities on the breeding activities of Himalayan griffons (*Gyps himalayensis* Hume, 1869): a case study from azad Jammu and Kashmir, Pakistan. The Journal of Animal & Plant Sciences, 27(2): 627-641
12. Fenwick G. 2017. The nature of threats to birds. News and perspectives on bird conservation. American bird conservancy. www.abcbirds.org.
13. Jammu and Kashmir Wildlife Protection Department. www.jkwildlife.com