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Research Article

FIRST REPORT OF PURE AND PARTIAL ALBINO HOUSE CROW (*CORVUS SPLENDENS*) FROM JAMMU (J&K)

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ABSTRACT

House Crow (*Corvus splendens*) is mostly commonly seen and perhaps the best known bird on the continent. Belonging to order Passeriformes and family Corvidae, House Crow is easily identified by its black body plumage contrasting with grayish head, nape and breast sides. Present piece of work is a report of rare sighting of pure and partial albino in case of House Crow (*Corvus splendens*) from Jammu.

Key Words:

Pure Albino, Partial albinism, House Crow (*Corvus splendens*), foraging and aggression.

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INTRODUCTION

Albinism itself is a rare problem of birds where the pure albinos are very rare, only 7% of the 1845 cases of albinism are summarized by Gross (1965). Albinism is a genetic disorder due to the deficient synthesis of the melanin regulating enzyme Tyrosinase, a melanin precursor and is classified in four types viz. total or pure albinism, incomplete albinism, partial albinism and leucism by Pettingil (1956); Chowdhury *et al.* (2013) and Kabir (2014). Mechanisms leading to loss of tyrosinase activity in local regions of a bird's skin have not been elucidated, but presumably involve mutations or other known mechanisms of gene inactivation (David and Kennedy, 2002). It is also defined as a lack of melanins of both in feather, eye and skin as a result of an inherited absence of tyrosinase enzyme (Fox and Vevers 1960). Albino happens by the activation of autosomal recessive gene (van Grouw 2006). Albinism is known in several bird species since very long but it is a rare occurrence especially in crows.

MATERIAL AND METHODS

Study Area

Gifted profusely by the Nature God, the state of Jammu and Kashmir is a heaven on earth. The sky touching mountains, the

sun-kissed peaks, diverse soil and vegetation has made it a paradisiacal land. The city of Jammu is situated on a hillock on the banks of river Tawi.

Gharana Wetland (Reserve)

Gharana Wetland (Reserve), R.S. Pura is situated in sub-tropical region of Jammu and Kashmir state, Northwestern India (~) 10 miles east of the Indo-Pakistan International border (Fig.1). Geographically, it lies between 32°36'51.52" N latitudes and 74°38'58.15" E longitudes. The main source of water at this station is Ranbir Canal. Gharana Wetland is under J&K Wildlife (Protection) Act, 1978 and is declared as, "Important Bird Area". This wetland lies along the Palaearctic - Oriental migratory route of aquatic birds and serves as a wintering ground for many bird species from Central Asia. Most of the area is surrounded by lush green fields of Wheat (*Triticum aestivum*) and Rice (*Oryza sativa*). Dominant vegetation included trees like *Eucalyptus globulus* (Safeeda), *Psidium guajava* (Amrood), *Mangifera indica* (Mango), *Melia azedarach* (Dhrek), *Acacia nilotica* (Babul), *Syzigium cumini* (Jamun), *Ficus religiosa* (Peepal), *Ficus benghalensis* (Bargad) etc. The area was observed to be least disturbed by transportation, thus providing a good habitat for birds.

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It lies at 32°67'N latitude and 76°50' E longitude and possessed trees like *Melia azedarach* (Dhrek), *Acacia nilotica* (Babul), *Psidium guajava* (Amrood), *Morus alba* (Toot), *Eucalyptus globulus* (Safeeda), *Azadirachata indica* (Neem), *Albizia lebbek* (Siris), *Dalbergia sissoo* (Talli), *Jacaranda mimosifolia* (Neeli gulmohar), *Ficus benghalensis* (Bargad), (*Saraca asoca*) Ashoka etc. It comprises of many departments, canteens, hostels, botanical and cactus gardens etc.



Figure 1 Map of study area (i.e. Gharana Wetland and University of Jammu)

METHODOLOGY

Study was carried in both the study station from 2013 to 2014 in the study area.

Tools used

1. Sony Digital Camera (DSC-HX 100V).
2. Canon EOS 600D Camera.
3. Bushnell 7X50 U.S.A. made binoculars.

RESULTS AND DISCUSSION

1st Case Study: Pure Albinism

House Crow (*Corvus splendens*) is the most common and widely distributed resident bird in Jammu. *Corvus splendens* means 'shining raven' and refers to the glossy, jet black feathers on the face, crown, chin and throat with no sexual dimorphism. The coloration of common house crow *Corvus splendens* is normally dark black alongwith streaks on throat and breast (Ali and Ripley, 2001). During the study period, a consort pair of House Crow was seen in open agricultural fields near Gharana Wetland, in which one partner was having a normal body plumage and other partner was pure albino having pure white plumage, light pink beak, reddish pinkish iris and pinkish skin (Fig. 2 A and B). In oculocutaneous albinism or total/pure albinism the pigment deficiency involves the skin, hair and eyes Spritz (1994). It was observed that, the other conspecifics were showing aggression by harassing and attacking the albino crow while sharing the same feeding ground and this aggression might be because the other conspecifics felt the albino crow as an intruder due to lack of actual coloration or plumage. However, the co-partner was not showing any sort of aggression and was mutually feeding with the albino. Moreover, no nest was recorded in the vicinity of the area and the probable reason might be because the other crows didn't allowed the pair to build the nest and treated the albino not a member of their own species but rather a foreign

intruder. Chowdhury *et al.* (2013) reported pure albinism in a Common Crow (*Corvus brachyrhynchos*); Surender *et al.* (2015) recorded partial albinism in House Crow from Baswapur village, Telangana.



(a) Pure albino House Crow (*Corvus splendens*)



(b) Foraging association with normal Plumage

Figure 2

2nd Case Study: Partial albinism

One individual of Common House Crow (*Corvus splendens*) having partial albinism was sighted along with large foraging group in main University campus, Jammu. The individual was lacking normal coloration from few primaries and secondaries (flying feathers) and under tail coverts which were usually visible when in flight and was also found to feed in alliance with members of both inter and intra specifics because the partial albinism was not easily observable from its body plumage as it was present on edges of flying feathers and under tail. Sharma *et al.* (2015) reported partial albino Common House Crow from Central Aravalli foothills, Rajasthan.

CONCLUSION

It can be concluded that birds do perceive colour variations and also use it as a source of identification of members of same or different species. Though pure albinism is very rare in birds and the presence of these albino species in the present study area is quite interesting to record the behaviours of these birds and can be a great field for carrying out future studies.

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