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First Record of *Ardeola grayii* (Sykes) 1832 from Lossar and Kunzam La in Spiti Valley, Himachal Pradesh, India

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ABSTRACT: *Ardeola grayii* (Sykes) 1832 known as Indian Pond-Heron, has been reported for the first time from the vicinity of Spiti river at Lossar Village of Spiti Valley, Himachal Pradesh, India. In almost barren cold dessert of Spiti vally, Lossar village has little vegetation of shrubs, wild willow and *Betula utilis* Don commonly known as Himalayan Birch or Bhojpatra. A solitary Indian Pond-Heron was found feeding on insect larvae in this area. This is a new record of this bird from high altitude and this different but interesting migration pattern is opening the new vista of avian record from wetland and barren lands of Lahaul Spiti district of Himachal Pradesh, India.

Keywords: *Ardeola grayii*; First record; High altitude; Migration; Spiti valley.

INTRODUCTION

Migration is a normal part of the life cycle of many species of birds, but it is an activity fraught with risk. Challenges presented by having to cross high mountain passes (such as the Trans Himalayas) and sudden onsets of inclement weather have always been part of migration in these high altitude areas. However, over the past two centuries migration has become even more difficult because of extensive habitat loss, fragmentation of remaining habitats and urbanization of the landscape. Additional challenges may be presented by climate change because of related increases in the frequency of extreme weather events and changes in temperatures at different latitudes.

In almost barren cold dessert of Spiti valley, Lossar village with a little vegetation, sighting of Indian Pond-Heron is scientifically interesting keeping in view all the factors from high altitude, climate change to alterations in the migration pattern of birds.

MATERIAL AND METHODS

This bird was observed by 10 x 50 super Zenith field trismatic binocular and 1000 mm tele-lens of Questar make. The Indian pond heron was photographed with the help of Nikon D-80 Camera with zoom telly lenses. The field identification was carried out with the help of field guides (Ali and Ripley[1], 1983 and Grimmett[2] *et al.*, 1999). The identification was based on its morphological characters and not even a single bird was captured and killed during this investigation. This work was carried out during June and July months of 2014.

RESULTS AND DISCUSSION

Migration can be defined as the seasonal movement of species from one place to another. Birds migrate to areas where: (a) food is more abundant, (b) there is less competition for nesting space, (c) the climate is milder, or (d) the daylight hours are longer to enhance the chances of survival of a bird and its brood. Most birds require a rich, abundant supply of food at frequent intervals because of their high metabolic rate. Adequate food is not available throughout the year in most regions. The nature of a bird's migration

can have significant consequences on that bird's survival, and potentially the status of its population (Hutto[3] 1998 & 2000[4]).

Ardeola grayii (Sykes) 1832 known as Indian Pond-Heron belongs to family Ardeidae of order Ciconiiformes and generally found in marshy areas of ponds and wetlands. It is an egret-like marsh bird chiefly earthy brown when at rest, but with the glistening white wings, tail and rump flashing into prominence immediately it flies. This bird is distributed through Pakistan, Burma, Bangladesh, Srilanka and throughout the Indian Union in plains and up to about 1500 m elevation in hilly area. In Himachal Pradesh Indian Pond-Heron has been reported from Bilaspur, Hamirpur, kangra, Sirmour, Solan and Una districts with altitudinal range of 460-1500 mts. But recently it has been noticed in the marshy area of Spiti river near Kunam La and Lossar area of Spiti vally in Lahaul and Spiti district of Himachal Pradesh (Figures 1and 2). Kunzum Pass is a high mountain pass (15060 ft.) on the eastern Kunzum Range of the Himalayas about 122 km from Manali. It connects the Kullu Valley and Lahaul Valley with the Spiti Valley of Himachal Pradesh, India.

Figure 1: Indian Pond-Heron flying over the Spiti river near Kunzam La.

Figure 2: Indian Pond-Heron in marshy area of some bushy shrubs and wild willow forest near Lossar in Spiti valley of Himachal Pradesh, India.

Indian pond heron had highest niche width as compared to other herons (Sodhi[5], 1992). The bird was found in a marshy area where there was a lot of variation of food. Many studies have observed feeding ecology of Indian pond herons (Kirkpatrick[6], 1953; Sodhi[7], 1986; Mathew[8] *et al.*, 1978; Andrews[9] and Seedikkoya[10] *et al.*, 2012). The primary food of Indian pond heron includes crustaceans, aquatic insects, fishes and amphibians (Mathew[8] 1978; Sodhi[7], 1986). Indian pond heron also feeds on dragonflies (Santharam[11], 2003), bees (Prasad and Hemanth[12], 1992), earthworms (Raza[13], 1993).

The nesting season of Indian pond heron is chiefly between May-September and in Spiti this bird was found solitarily in July and no breeding plumage observed because, in breeding season it acquires maroon hair like plumes on back and long occipital crest (Ali[14], 2003). Bates and Lowther[15] (1952) have also reported May as the nesting month of the bird in Kashmir.

It is very interesting to find Indian pond heron at such great heights crossing the 4,590 m kunzum pass. A solitary Indian Pond-Heron was found feeding on insect larvae in this area. This is a new record of this bird from high altitude and this different but interesting migration pattern is opening the new vista of avian record from wetland and barren lands of Lahaul Spiti district of Himachal Pradesh, India.

This was a very unusual sighting of Indian pond heron at such a high altitude and geographically isolated area. Despite the importance of this migratory phase of a bird's life, there are many difficulties in studying migratory patterns and dynamics, and consequently there is a limited understanding of the migration needs and challenges for many bird species (Hutto[3] 1998; Mabey and Watts[16] 2000; Moore and Aborn[17] 2000; Rappole[18] 1995). More research is needed to study this interesting migration pattern and fill the data gaps. Knowledge of the arrival dates and breeding dates of bird is important for studying long term trends of changes in timing of breeding in the ongoing climate changes (Parmesan & Yohe[19], 2003). Therefore, such information could be used as an indicator tool and impact assessment on the climate changes and ecosystem of a particular area.

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