



## COVID-19 LOCKDOWN AND INCIDENCE OF BIRDS NEAR RAM GANGA RIVER AT BRASS CITY MORADABAD, UTTAR PRADESH, INDIA

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### AUTHOR'S CONTRIBUTION

The sole author designed, analysed, interpreted and prepared the manuscript.

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### ABSTRACT

COVID-19 has emerged as havoc globally but as a creator of certain panoramic views at Moradabad. Moradabad is known as brass city which is famous for its brass export around the world. Average AQI of Moradabad was increasing at alarming rate due to continuous emission from brassware factories, automobiles and other sources. Last year, it was measured 435 (Indian Central pollution Control Board), but after lockdown it came to 107-134. The birds of different migratory species were incident near Ram Ganga River along with the native birds from lockdown 1.0 to lockdown 3.0.

**Keywords:** Lockdown; Covid 19; air quality index; birds; Brass City.

### 1. INTRODUCTION

Covid-19, unknowing disastrous virus changed us all somewhat confusing and alarming. Settling into self-isolation may seem like a challenge. In recent days, several authors have been continuing to immerse themselves in nature and green spaces [1]. There are a few ways by which one can remain connected to nature and wildlife from own home and garden the literature reads [2].

Even as the lockdown has put people to hardships, it has come as a treat for bird watchers. Results of the week-long lockdown birding competition by Central India Birders Network (CIBN), a group of city birder revealed that many bird species, which are usually found near forests and water bodies or greener landscapes, have been quite frequently sighted in the city areas [3].

Air and noise pollution has decreased returning to normal AQI due to the check on Brass factories, construction, automobiles, movement of both people and vehicles. As people are mostly confined to their houses, there is lesser interference of human beings also. During lockdown 1.0 migratory bird were incident near water bodies taking different flyways. Birds communicate more when there is less noise.

#### 1.1 Study near Ram Ganga Region, Moradabad

According to Divya Priya, who studies birds in a region, where the noise pollution is low, the bird population will be good. The ambient noise in the city 'masks' the call of the bird, so it needs to increase its frequency and loudness to be heard [4].

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According To Jeganathan, the birds cannot be found nesting within the first hundred meters near roadside in forest due to noise [5]. This lockdown period will help the ornithologists and researchers all over the world. The studies about relationship between the bird calls and noise pollution, needs extensive study.

Singing, chirping and chattering of birds started during first week of lockdown 1.0 at Moradabad UP. It can be because there is less noise in the environment, due to the lockdown as well the pollution in the atmosphere; Average AQI was found moderate in comparison to previous days. It is found that the level of PM10 was only 107-134 [6].

According to the Central Pollution Control Board's daily bulletin, Moradabad tops the most polluted cities list on Thursday. Situated on the banks of the Ram Ganga river in Uttar Pradesh, this city recorded an Air Quality Index (AQI) of 435, which falls into the 'severe' category [7]. This rise in pollution levels in the region comes in the same week wherein the Uttar Pradesh Pollution Control Board (UPPCB) came down heavily on the Moradabad coal factories that were operating without pollution control systems [8].

People living in crowded urban areas are more likely to see birds that can cause a nuisance than those that make us genuinely happy, a study has found. Researchers at the University of Exeter and the British Trust for Ornithology in the UK found that crowded urban areas have fewer songbirds such as tits and

finches, and more potential nuisance birds, such as pigeons, magpies and gulls. They examined ratios of birds-to-people and found areas of high-density housing have fewer birds overall [9].

## 2. MATERIALS AND METHODS

Daily observation at different intervals period of the day were made and tabulated, photography was done with the help of Nikon Coolpix L-840 camera at the site near (Approx. 500 mt.-750 mt.) Ram Ganga River, Moradabad. The identification of birds was undertaken from Merlin bird photo id by Cornell lab, California.

## 3. OBSERVATION

Observations were made at sight near Ram Ganga River, Moradabad, UP, India (Table 1).

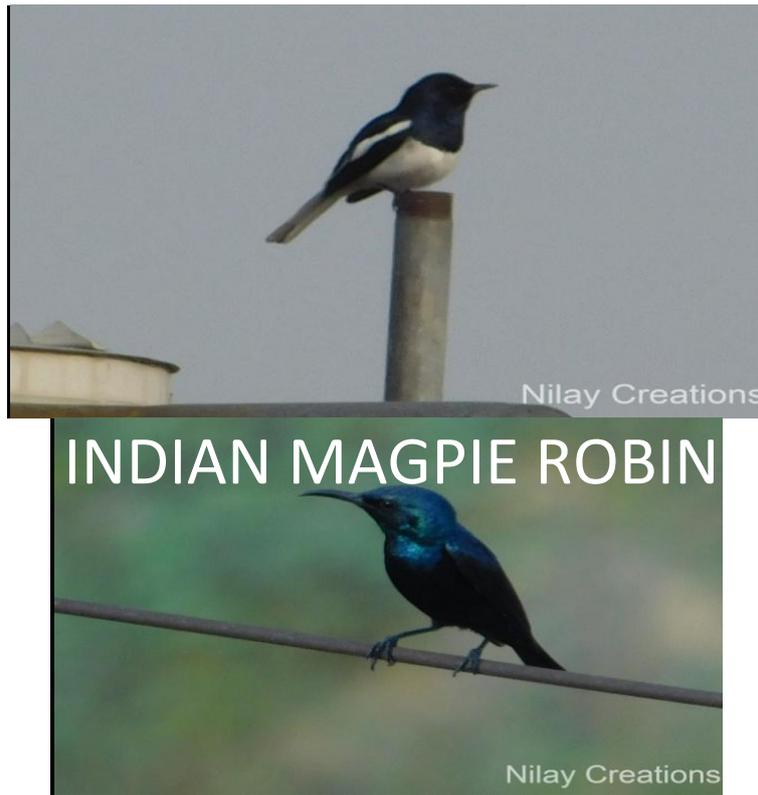
Daily incidence of nearby five new species of birds was observed commonly during lockdown 1.0, where Dove, Brown rock chat, Nuthatch, Parrots, (Fig. 1) were seeing in abundance.

On the subsequent days of lockdown 1.0-2.0 Indian magpie robin, Purple sunbird (Fig. 2) with their colourful coat were seen but with less count.

Daily incident of Red Vented bulbul, Myna, white throated kingfisher, common kingfisher (Fig. 3) started looking normal to our sight during lockdown 2.0.



**Fig. 1. Daily incidence of nearby five new species of birds during lockdown 1.0, Dove, Brown rock chat, Nuthatch, Parrots**



INDIAN MAGPIE ROBIN

**Fig. 2. Daily incidence of nearby new species of birds during lockdown 1.0 to 2.0 Indian magpie robin, Purple sunbird**



**Fig. 3. Daily incidence of nearby new species of birds during lockdown 2.0 Red Vented Bulbul, Myna, White throated kingfisher, Common kingfisher**

At the end of lockdown 2.0 mustard colour bird called Roufus treepie (Fig. 4) was seen in flocks flying over the sky.

Sound of Cuckoo echo, Ashy prinia, Crow, Pigeons and Eagle (Fig. 5) were heard till the end lockdown 3.0 however, migratory birds count decreased with onset of lockdown 4.0.

It proves that warming temperatures, shifting seasons, rising sea levels and other environmental factors are disrupting the behavior of feathered and flying creatures and the ecosystems that support them (www.massaudubon.org). The people living in

crowded urban areas are more likely to see birds that can cause a nuisance than those that make us genuinely happy, a study has found.

Researchers at the University of Exeter and the British Trust for Ornithology in the UK found that crowded urban areas have fewer songbirds such as tits and finches, and more potential nuisance birds, such as Pigeons, Magpies and Gulls. They examined ratios of birds-to-people and found areas of high-density housing have fewer birds overall [10-12]. Several rain showers during lockdown 1.0 to 4.0 (from 25.03.2020 to 17.05.2020) were also a boon for the incidence of birds at residential area near Ram Ganga River [9].



**Fig. 4. Birds at the end of lockdown 2.0 mustard colour birds called Roufus treepie**

**Table 1. Species of birds found at different intervals of period of lockdown at Moradabad**

Sr. no.	Period of Lockdown	Species of Birds
1.	Lockdown from 1.0 to 2.0 (from 25.03.2020 to 14.04.2020)	Dove, Brown rock chat, Nuthatch, Parrots
2.	Lockdown from 2.0 to 3.0 (from 15.04.2020 to 03.05.2020)	Red Vented Bulbul, Myna
3.	Lockdown from 3.0 to 4.0 (from 04.05.2020 to 17.05.2020)	Cuckoo, Sparrow, Crow, Pigeons and Eagle



Fig. 5. Birds at the end of lockdown 3.0 Cuckoo echo, Ashy prinia, Crow, Pigeons and Eagle

#### 4. CONCLUSION

Migratory and other native birds found their space clean and clear due to corona pandemic positivity. It is advisable to government to make less development near Ram Ganga river to provide breeding ground and migratory pathways for birds.

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#### COMPETING INTERESTS

Author has declared that no competing interests exist.

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