

We Hear From

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Declining Trends of Trans-Himalayan Migratory Guests at Santragachi Jheel

Compared to last year, the number of birds is more but the number of species has decreased in Santragachi Jheel particularly the trans-Himalayan migratory bird species even in a strange winter since the beginning in 2023. The end of November, beginning of December was bone-chillingly cold in Bengal. Bone-chilling cold with the north wind, the whole state felt the chill of winter. Even Kolkata has a good winter. Meanwhile, the cold suddenly disappeared at the end of December. At the beginning of January, spring's mood was felt again. At times some days it is hot again during the day. Although winter is taking its toll, a record number of winter migratory birds have been observed in Santragachi Jheel. Like every year, bird counting starts at Santragachi Jheel on the second Saturday of January which is a fixed schedule for counting of birds for the last 10 years since 2015. It is known that the number of birds is quite high this year. A large number of migrants have gathered in Santragachi Jheel for winter. However, the number of distant migratory bird species has decreased greatly.

Every year, as winter falls, thousands of migratory guests flock to Santragachi Jheel near Santragachi railway station [1]. Migratory birds crossing the Himalayas or from the foothills come here in search of food, usually from the end of October. This year, however, the migratory birds arrived a little late. But sometimes it gets quite cold for a few days, so flocks of migratory birds

gather here. A total of 5703 migratory birds arrived this year as per the count by the Nature Mates (Tables 1 & 2). Among them there are 15 trans-Himalayan species of birds. They are Northern Pintails, Gadwall, Ferruginous Duck, but Common Teal and Garganey are absent. Their numbers are 1,12, and 2 respectively forming slim segments in the chart (Fig. 2). In addition, a total of 13bird species have arrived (Table 2 & Fig. 2). These include Common Moorhen, Bronze Jacana, Purple Heron, White Wagtail, Little Cormorant, Great Indian Pond Heron, Cattle Egret, White breasted waterhen, Barn Swallow, and White Throated Kingfisher and other birds. The birds are able to live very comfortably due to the limited amount of water hyacinth in the lake. Noise pollution and nuisance can easily be hidden in clutter. Therefore, the breeding of pre-dwelling birds has benefited the migratory birds.

Two of the reasons for bird migration are availability of food and breeding. Most Northern Hemisphere birds come north in the spring to feed on abundant insects and newly born plants and plant parts. During this time, they build nests and reproduce. They head south in winter due to ice or other times when food is scarce. Weather is also considered as another reason for migration. Many birds migrate during winter. Springtime means around March-April when the snow melts in the colder regions. Some plants start to grow. It is currently that the visiting birds return to their homes. The funny thing is, when they go

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back, they recognize their own habitat. But the trans-Himalayan birds are no longer coming which is cause for considerable concern. But the local migrant population like lesser whistling ducks have come back again with a number of about 5615 in 2023 in the Santragachi Jheel though such count was declined in the year 2018 which is welcomed by the bird lovers.

Table 1. Bird Cases at Santragachi Jheel

Year	Bird Census
January 2015	6984
January 2016	5232
January 2017	2920
January 2018	800
January 2019	2899
January 2020	2694
January 2021	5600
January 2022	6742
January 2023	5703

Number of migratory guests at Santragachi Jheel is now stable after a marked decline in numbers for the period 2017-2020 (Table 1). Analysis of the data shows declining trends of migratory birds especially lacking the trans-Himalayan bird species like Northern Pintails, Gadwall, Ferruginous Duck, Common Teal, Garganey.

The trendline is given by $y = -1.8385x^6 + 57.089x^5 - 717.94x^4 + 4575.5x^3 - 14643x^2 + 19372x - 1669.9$ with confidence of 94% ($R^2 = 0.9433$). The forecast shows another steep decline in bird count which is in line with a very high sample

variance ($var_s = 4538226.861$) for the median of the data, 5232 giving the impression that the count is highly volatile and easily susceptible to plummets (Fig. 1).

Table 2. Different Birds Sighted on 15 January 2023 at Santragachi Jheel on The Day of Annual Bird Count

Bird Species	Count
Lesser Whistling Duck (a)	5615
Gadwall (b)	12
Northern Pintail (c)	1
Ferruginous Duck (d)	2
Common Moorhen (e)	15
Bronze-Winged Jacana (f)	4
Purple Heron (g)	10
Indian Pond Heron (h)	10
Cattle Egret (i)	31
White-Breasted Waterhen (j)	2
White-Throated Kingfisher (k)	2
Citrine Wagtail (l)	2
Barn Swallow (m)	6

In 2017-18, the waterbody covered in water hyacinth was neglected by the spooked migratory birds. Not being able to spot the waterbody probably drove them out. The early cleanup of the lake in 2022 seems to have largely improved the water quality to a suitable level for the immigratory guests to settle there and subsequently increased this year's bird count, almost doubling that of December 2021 (which was approximately 3000).

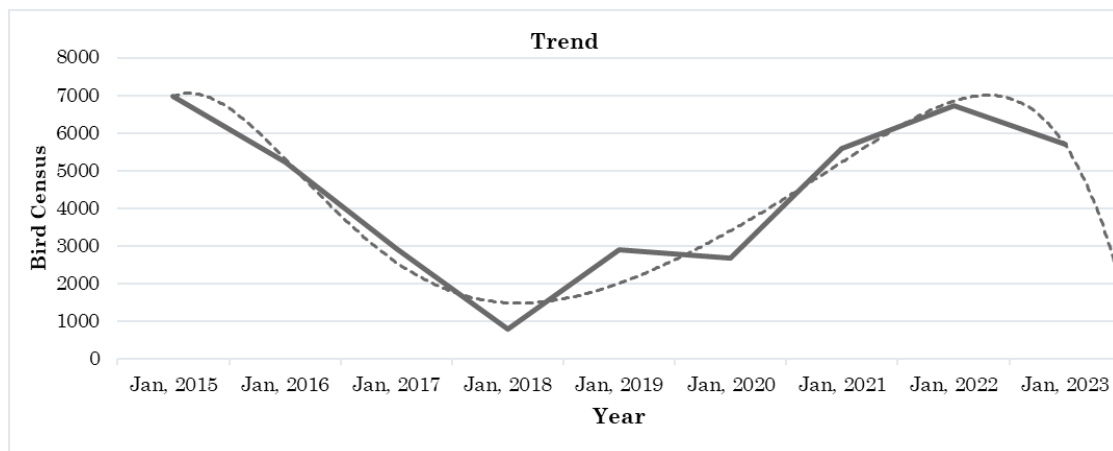


Fig. 1.: Declining Trend of Migratory Birds

The number of migratory birds in December 2022 was 5700 in Santragachi Jheel which was counted to only 5703 on 15 January 2023 on the day of bird census for this waterbody. This is because of the rise of temperature on 14 January 2023. A 19.7°C rise in temperature may have caused the migrant guests, who left in the morning of 14 January in search of food, not to return to the waterbody and perhaps settle on other waterbodies with a cooler atmosphere further away from the city outskirts.

References

1. G K Das, Reuses of Water Hyacinths of Santragachi Jheel, Indian Science Cruiser 35(3), 8, 2021.

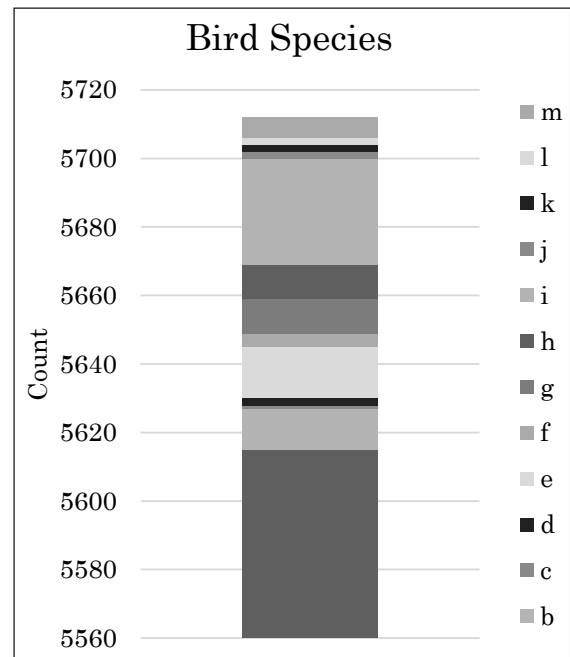


Fig. 2. Bird species count at Santragachi Jheel