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Assessment of Avifaunal Diversity And Conservation Status in the Jhalana Forest Area of Jaipur District, Rajasthan, India

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Abstract: A research was done to assess the avian biodiversity along the Jhalana Forest roadside, in close proximity to the Jagatpura Flyover in Jaipur. The study was conducted for a duration of six months, spanning from September 2022 to February 2023. The survey covered an area of approximately 1.00 km and recorded a total of 42 bird species belonging to 18 distinct groups. Among the 42 bird species that were observed, 3 were classified as migratory. The migratory species include the Yellow-footed green pigeon, Rosy-starling, Robin accentor, and Ashy drongo. The dominant avian species observed were Jungle babbler, common myna, spotted dove, blue rock pigeon, house crow, black drongo, and various others. The Jhalana Leopard Reserve holds the distinction of being the inaugural leopard reserve in India.The Jhalana Leopard Conservation Reserve is home to about 40 leopards, which includes 5 cubs.The final tiger was killed in 1948.Jhalana covers an expanse of 20 square km.The Rajasthan Forest Department officially designated Jhalana as a Leopard Reserve in 2017. Jhalana was inaugurated for public visitation in December 2016. The Jhalana forest harbors a wide variety of trees, which may play a crucial role in the proliferation of bird species.

Key words: Jhalana Forest, Avian Diversity, Birds, Leopard Reserve

INTRODUCTION:

Birds are chordates classified under the class Aves. Aves is the scientific term for birds, which are animals with feathers, wings, two legs, warm blood, and the ability to lay eggs. Uey populate every habitat worldwide. There is a significant variation in the size of birds, ranging from the Bee hummingbird, which measures 5cm, to the Ostrich, which measures 2.5m.Birds are among the most prominent species in Earth's biodiversity and exhibit sensitivity to environmental changes [1]. Uey serve as a crucial indicator for evaluating the condition of ecological well-being. They are an essential component of the food chain and food web. Birds are essential for maintaining ecological equilibrium. They also assist in the process of pollinating flowers and dispersing seeds. Ecologists frequently utilize the richness, abundance, and community composition of birds as indicators to comprehend the species diversity in natural environments [2]. Habitat loss is a significant issue that affects bird diversity. Consequently, a large proportion of bird species inadvertently migrate to and settle in urban areas. Changes in vegetation

composition can have an impact on the availability and quality of habitat for birds, including their access to food, water, and cover. These changes can subsequently influence the diversity, abundance, and dispersion of bird populations [3,4].
A recent study conducted by the American Museum of Natural History indicates that there are around 18,000 bird species worldwide [5]. The journal Indian Bird, published in 2016 and authored by Praveen et al., provides a check-list of bird species in India. According to this check-list, there are approximately 1,263 bird species in India, which accounts for 12% of the total bird species worldwide [6-8]. Nature conservation and protection of wildlife are an integral part of Rajasthan's culture, which shows itself in the prevalent faith and traditions of its society. With descriptions of 473 species, illustrated with over 500 photographs, Birds of Rajasthan will be a useful addition to any library. [9-10]. The aim of this study is to investigate the range of bird species found in the Jhalana Forest roadside, near the Jagatpura Flyover in Jaipur. Since no prior research has been conducted on bird diversity in this specific location, this study will provide valuable baseline data on bird diversity.The study will evaluate the variation in bird community among these specific sites [11,12].

MATERIALS AND METHODS:

SITE SELECTION :

A study was conducted within the confines of the Jhalana Forest roadside, near the Jagatpura Flyover in Jaipur. The Jhalana Forest roadside, near the Jagatpura Flyover in Jaipur is known to be inhospitable for birds. The Jhalana forest is located in the foothills of the Aravalli range, just outside the industrial district of Jaipur city. It covers an area of 17 square kilometres. The region exhibits a varied geography, featuring the rugged Aravalli range on one side and a lush forest of both evergreen and deciduous trees on the other, which forms its perimeter. Jhalana exhibits a wide range of geographical features, including hills, valleys, plateaus, sand dunes, nallahs, and gullies. The study region is located at a latitude of 26° 55' North and a longitude of 75° 49' East. Geographically, it falls within the semi-arid zone of India. The region is characterised by a high temperature, low rainfall, and mild winter. The average temperature ranges from 18°C in winter (January) to 40°C in summer (June), with a mean temperature of 36°C. The normal rainfall is 600 mm, with almost 90% occurring during the summer monsoon period from June to September. The remaining rainfall comes from winter cyclones. The area is a designated forest reserve that serves as the habitat for several species of untamed flora, approximately 20 leopards, and over 100 species of birds, including predatory birds such as shikras and white-eyed buzzards. This showcases the rich diversity of the natural world and its riches.

INSTRUMENTS USED:

The instrument used was the Olympus 8×40 DPS Binoculars. Binoculars are a pair of telescopes that are positioned next to each other and adjusted to face the same direction. The most crucial factor is comportment. The device must possess ergonomic design for ease of handling. All binoculars possess a pair of two digits that indicate their specifications, sometimes preceded by a letter code such as B or GA. The initial figures denote the magnification, typically ranging from 7X to 10X.The term "Uesecondfigures" refers to the diameter of the bigger lens, specifically the objective lens, measured in millimetres. The size of the binocular is determined by the second figure, either GA or RA, which indicates if the binocular is covered with rubber, providing some protection against impact and wear.For general bird watching, smaller magnification binoculars with a power of 7X or 8X are typically employed. As the magnification decreases, the image becomes brighter and the field of view becomes wider.

AREA SEARCH:

The Ue area search is a quantitative survey approach that is specifically designed for habitats and may be used in a wide range of environments. It is particularly good for measuring diversity, including species richness and bird community composition. and relative abundance; as well as providing Avian Habitat Information regarding the relationship, natural history, and reproductive behaviour. The Uemethod is very suitable for public education and training observers as well. The methodology entails conducting a survey within a specific region, limited by a specific time frame. During this survey, the observer documents all avian species observed or heard, distinguishing between those discovered within the given area, outside of it, and flying over it. Vegetation surveys are conducted in a search area using a suitable approach. The birds were observed by remaining stationary and concealed in hiding spots.

BIRD WATCHING TECHNIQUES:

Identifying a bird can be a complex task. Avian creatures are highly dynamic and vigorous. Rapid visual detection is necessary to gather potential information within a limited timeframe. The following approaches were employed during bird watching: Birds were identified by maintaining visual focus on them. Systematic observations were conducted to monitor their locomotion, vocalizations, dietary preferences, and physical dimensions. At the same time, distinct calls and melodies were also recognised.The size, form, and distinguishing strips and patches of color, such as crown strips, eye lines, nape colour, eye arcs or rings, and bird's beak size, were observed. Observations were made on the presence of wing bars, colour patches, and markings on the bird's body during both stationary and flying stages. Each observation also recorded the colour and length of the legs. The observations were verified using the Airbase bird count data from 2013.

RESULTS AND DISCUSSION

Through our uninterrupted surveillance spanning from September 2022 to February 2023, we have discerned a total of 42 distinct avian species. The whole list of these species may be found in Table 1 below:

Table1:Most frequently found birds.

S.No.	Birds	STATUS NEABY JAGATPURA FLYOWER	S.No.	Birds	STATUS NEABY JAGATPURA FLYOWER
1.	Indian Robin-FEMALE	Widespread	26.	House Sparrow	Widespread
2.	Oriental Magpie Robin	Seasonal	27.	Jungle Babbler	Widespread
3.	Taiga Flycatcher	Rare	28.	Common Myna	Widespread
4.	Robin Accentor	Migratory	29.	Jungle Myna	Seasonal
5.	White-browed Wagtail	Seasonal	30.	Asian Pied Starling	Seasonal
6.	Long-billed Pipit	Rare	31.	Rosy Starling	Migratory
7.	Hoopoe	Rare	32.	CommonTailorbird	Rare
8.	Blue Rock Pigeon	Widespread	33.	Great Tit	Seasonal
9.	Spotted Dove	Widespread	34.	House Crow	Widespread
10.	Yellow-footed Green Pigeon	Migratory	35.	Jungle Crow	Widespread
11.	Rose-ringedParakeet	Rare	36.	RufousTreepie	Widespread
12.	Black Kite	Widespread	37.	Black Drongo	Widespread
13.	Shikra	Rare	38.	Racket Tailed Drongo	Widespread
14.	Marsh Harrier	Rare	39.	Ashy Drongo	Seasonal
15.	Brown-headed Barbet	Seasonal	40.	Red Whiskered Bulbul	Widespread
16.	Lesser	Rare	41.	Red Vented Bulbul	Widespread

	Himal ayan Flame back				
17.	Lesser Golden-backed Wood pecker	Rare	42.	Purple Sunbird-FEMALE	Seasonal
18.	Greater Spot tedWood pecker	Rare			
19.	Asian Koel-MALE	Rare			
20.	Asian Koel-FEMALE	Rare			
21.	Greater Coucal	Rare			
22.	Common Hawk Cuckoo	Rare			
23.	Spotted Owlet	Widespread			
24.	Jungle Owlet	Rare			
25.	Red-wattled Lapwing	Widespread			
26.	Indian Hornbill	Rare			
27.	Indian Roller	Rare			

The most commonly encountered avian species include the House Sparrow, Jungle Babbler, Common Myna, Blue Rock Pigeon, Spotted Dove, Black Drongo, Racket-Tailed Drongo, Rufous Treepie, Black Kite, and Bulbul. Additionally, there were some avian species that were infrequently observed throughout the duration of the study, including the Hoopoe, Indian Grey Hornbill, Woodpecker, Marsh Harrier, Shikra, Papiha, Indian Golden Oriole, and Indian Roller. Additionally, there were migratory bird species observed, including the Yellow-Footed Green Pigeon and Rosy Starling.This study examines the association between a healthy ecosystem and the presence of recorded bird species in a research building, in comparison to other selected regions of the Jhalana Forest roadside, in close proximity to the Jagatpura Flyover in Jaipur.The species diversity and condition of each bird species varied across different habitats due to variations in habitat and vegetation cover. The Jhalana Forest roadside, in close proximity to the Jagatpura Flyover in Jaipur is inhospitable for the birds. The presence of a diverse range of plants offers birds both nourishment and protection, potentially contributing to the occurrence of uismay.

CONCLUSION:

The findings of this study showed that there were 42 bird species from various orders and families, with the maximum number seen during the winter season and the lowest number during the summer season. The diverse ecosystems in Jhalawar harbour a wide array of avian species, underscoring the significance of the area. However, the richness of bird species in these environments is significantly impacted by anthropogenic influences. There is an immediate necessity to implement conservation measures that would focus on improving wildlife habitat management initiatives in the division.

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REFRENCES:

1. Main streaming conservation of migratory soaring birds in keyproductive sector along the riIvalley/red sea flyway, bird identification manual, ministry of environment.
2. Joshi PP (2001) Assessment of Avian Population in di9erent habitat around Amolakchand Mahavidyalaya Campus, Yavatmal, Maharashtra,India. J Biosci 4: 11.
3. Aggrawal A, Tiwari G, Harsh SA (1998) Diversity and Density Estimationof Birds of the Indian Institute of Forest Management Campus, Bhopal, India. J UreatTax 7: 2-12.
4. Abdar MR (2013) Diversity and Richness of bird species in newly formed habitats of Chandoli National Park in Western Ghats, Maharastra State, India. Biodiv J 4: 235-242.
5. Birdchecklist:Gorakhpur-Avibase-UeWorldBirdDatabase.
6. Salim Ali(1984)UeBookofIndianBirds,11thedn.
7. Salim Ali(1996)UeBookofIndianBirds,12thedn.
8. Siddiqui NA, Shahidullah M and Shahjalal MAH. An overview of diversity, trends and threats of birds. IndianJ. Forestry. 2008; 14(2): 17-45.
9. Khan, MMH (2008) Protected Areas of Bangladesh-A Guide to Wildlife.Nishorgo Program, Bangladesh Forest Department, Dhaka, Bangladeshpp:304.
10. Mohsanin S, Khan MMH (2009) Status and seasonal occurrence of thebirds in Jahangirnagar University Campus. Ban J Life Sci 21: 29-37.
11. Reza AMS, Hasan MA, Hossain M, Parween S (2012) Annotated checklistof birds of Rajshahi University Campus: an update. Univ J Zool, RajshahiUniversity 31: 39-47.
12. Asad R (2011) Rahamsni director. Bombay Natural History Society: birddiversity