



# Study of Avian Diversity and their Family Distribution of Maval Tehsil, Pune District, Maharashtra

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**ABSTRACT:**

Birds are the important factor which plays a vital role in ecosystem. The study gives in depth analysis of avian diversity in maval tehsil which is located in the Pune district. Maval taluka is known for its rich biodiversity and variety of topography like rich agricultural land, high altitude Western Ghat, aquatic bodies, deep forest etc. Maval taluka is comes under the Sahyadri range of Western Ghat in which rich biodiversity of fauna is present. There is rich diversity of birds in maval taluka due to its diverse habitats like dense forest, grassland, wetland, aquatic bodies, hilly regions etc. These surevy gives detail knowledge about the avian diversity and their family wise distribution. People are unaware about the bird species available in maval taluka. In maval there are many birds are present which shows the beauty of nature in the maval. Birds like Indian Vulture (*Gyps indicus*), Crested Serpent Eagle (*Spilornis cheela*), Changeable Hawk-Eagle (*Nisaetus cirrhatus*), Indian Spot-billed Duck (*Anas poecilorhyncha*), Malabar Pied Hornbill (*Anthracoceros coronatus*), Asian Paradise Flycatcher (*Terpsiphone paradisi*), Indian Peafowl (*Pavo cristatus*), Yellow-wattled Lapwing (*Vanellus malabaricus*), Green Bee-eater (*Merops orientalis*), Oriental Magpie-Robin (*Copsychus saularis*) etc can be observed during different seasons. These researches will definitely helps to other researcher to explore the new area in Western Ghat to observe the diversity of birds.

**KEY WORDS:** Avian Diversity, Maval, Family Distribution, Western Ghat.

**INTRODUCTION:**

In ecosystem birds performs a very vital role as prey, predators, pollinators, scavengers, seed disperses etc. Bird population indicates whether we are disrupting the ecosystem or not and declining bird population are an indication that the environment is in danger. Therefore protecting the bird population is crucial for preserving the ecosystem's balance. Pune is a city located in the western state of Maharashtra in India. The city is known for its rich biodiversity, with a variety of bird species found in and around the area. Pune is home to a diverse range of bird species, including both resident and migratory birds. Some of the common resident bird species found in Pune include Indian Peafowl, Black Kite, Common Myna, Indian Robin, and Red-vented Bulbul. These birds can be found throughout the year in various habitats, such as parks, gardens, and urban areas. In addition to resident birds, Pune also attracts a number of migratory birds during the winter months. Some of the migratory bird species found in Pune include the Siberian Stonechat, the Northern Shoveler, the Common Teal, and the Black-headed Ibis. These birds migrate to Pune from colder regions to escape the harsh winter conditions and can be seen in wetlands and other natural habitats.

Pune is also home to a number of bird sanctuaries and protected areas, such as the Bhimashankar Wildlife Sanctuary and the Mayureshwar Wildlife Sanctuary. These areas provide important habitats for a wide variety of bird species, including some rare and endangered species. The diversity of bird species in Pune makes it an ideal location for bird watching and nature enthusiasts. With a range of habitats and ecosystems, Pune offers a unique opportunity to observe and appreciate the beauty of these feathered creatures. Pune is known for its rich bird diversity. The region boasts of several natural habitats, including forests, hills, wetlands, and grasslands, which provide a suitable environment for various bird species.

Some of the common bird species found in Pune include the Indian Peafowl, Asian Koel, House Sparrow, Rose-ringed Parakeet, Common Myna, Oriental Magpie Robin, Black Kite, and Indian Robin. Other notable species include the Green Bee-eater, Baya Weaver, Indian Pond Heron, Brahminy Starling, Red-vented Bulbul, and Purple-rumped Sunbird.

The city also has several birding hotspots, including the Pune University campus, the Katraj Snake Park, the Pashan Lake, the Vetal Tekdi hills, and the Sinhagad Fort. These places attract a wide variety of bird species, including migratory birds, making Pune an excellent destination for bird enthusiasts.

However, like other cities, Pune's bird diversity faces several threats, such as habitat loss due to urbanization, pollution, and climate change. Conservation efforts, including creating awareness, protecting habitats, and monitoring bird populations, are crucial to ensuring the survival of the diverse bird species in Pune.

Maval Tehsil is located in the Pune district of Maharashtra, India. The area is known for its rich biodiversity and is home to a variety of bird species. Some of the bird species that can be found in Maval Tehsil are:

**Indian Peafowl** - The Indian Peafowl is a resident bird of Maval Tehsil and is commonly found in agricultural fields and forests.

**Black Kite** - The Black Kite is a bird of prey that can be spotted soaring in the skies above Maval Tehsil. It is a common sight in the area.

**Oriental Magpie-Robin** - The Oriental Magpie-Robin is a small bird that is commonly found in gardens and forests of Maval Tehsil. It is known for its beautiful singing.

**Indian Pond Heron** - The Indian Pond Heron is a wading bird that can be seen around water bodies in Maval Tehsil. It is known for its distinctive blue-grey plumage.

**Red-vented Bulbul** - The Red-vented Bulbul is a small bird that is commonly found in gardens and orchards of Maval Tehsil. It is known for its Voice.

**Common Myna** - The Common Myna is a bird that can be found in urban and rural areas of Maval Tehsil. It can imitate human speech, which is well recognized.

**White-throated Kingfisher** - The White-throated Kingfisher is a resident bird of Maval Tehsil that can be seen around water bodies. It is known for its stunning blue and orange plumage.

**Indian Roller** - The Indian Roller is a bird that can be spotted in open areas of Maval Tehsil. It is known for its striking blue and green plumage. These are just a few of the many bird species that can be found in Maval Tehsil. The area is a paradise for bird watchers and nature enthusiasts. Lonavala is a hill station located in the Western Ghats of India, which is known for its scenic beauty and rich biodiversity. There are several species of birds that can be found in Lonavala, making it a popular destination for birdwatchers and nature enthusiasts.

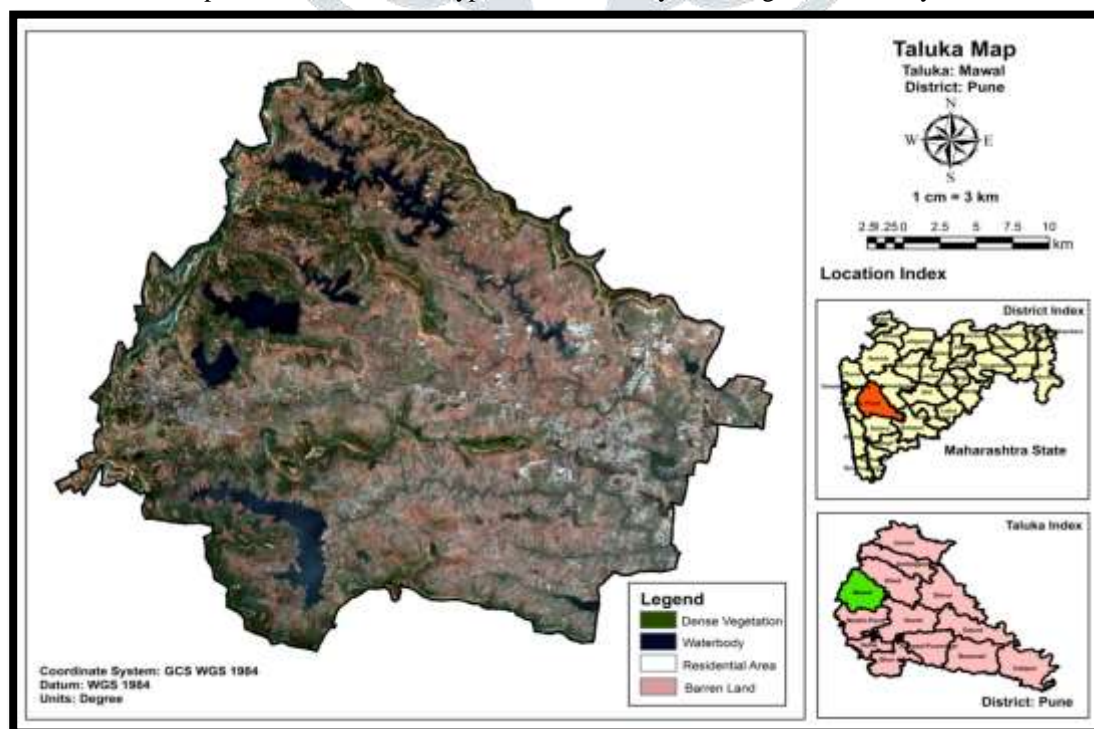
Some of the common bird species that can be spotted in Lonavala include the Indian Paradise Flycatcher, Asian Koel, Indian Grey Hornbill, Jungle Babbler, White-throated Kingfisher, Black-hooded Oriole, Indian Pitta, Rufous Treepie, and Indian Roller. Additionally, several migratory birds visit Lonavala during the winter months, including the Siberian Stonechat, Bluethroat, and Pied Avocet. Lonavala is also home to several species of raptors, such as the Crested Serpent Eagle, Shikra, and Bonelli's Eagle. The nearby Tung Fort is a great place to spot these birds of prey as they hunt for their prey.

## RESEARCH METHODOLOGY:

### STUDY AREA:

Maval is a centre point between Mumbai and Pune and is located in the Pune district to the west. The maval area is comes under the Western ghat as the Sahayadri range's hilly topography can be found there. From Shri Santa Tukaram Maharaj to Chatrapati Shivaji Maharaj, Maval has a rich cultural and historical background. Maval has the potential to grow and flourish as a perfect development model due to its geographic location, mild climate, natural beauty, cultural legacy, and train and road connectivity. Maval is blessed with vast biodiversity as climate is suitable for various kinds of animals. Due to the availability of ample amount of water in this area, local as well migratory birds are found in this area. Maval is well known as presence of various types of bird viz. local, migratory, rare, endangered and threaten. As there is very less study done on the habitat and diversity of birds I choose this area for study.

In maval tehsil there is a availability of dense forest in many areas such as andar maval, lonavala, kamsket, malavali etc. there is also availability of aquatic bodies where aquatic birds as well as migratory birds can easily observed. It is very convenient to travel in the whole maval as there is availability of lots of transport facilities such as local train, bus service, national highway etc. the main purpose to choose this area for the study is that the dense forest, hilly regions, mountains, aquatic sources, open land etc. it is the perfect location for all types of birds to stay or to migrate seasonally.



GIS Image Shows the Study Area of the Maval Tehsil, Dist. Pune, Maharashtra

**Data Collection and Identification:**

Birds were observed by using photographs capturing and bird classification into different categories viz. Local Birds, Migratory Birds, Water Birds, Domestic Birds, Rare, Endangered and Threatened Birds. Classification will also be done on the basis of their feeding habits viz. Carnivorous Birds, Insectivorous Birds, Nectar Insectivorous Birds, and Ground Insectivorous Birds etc.

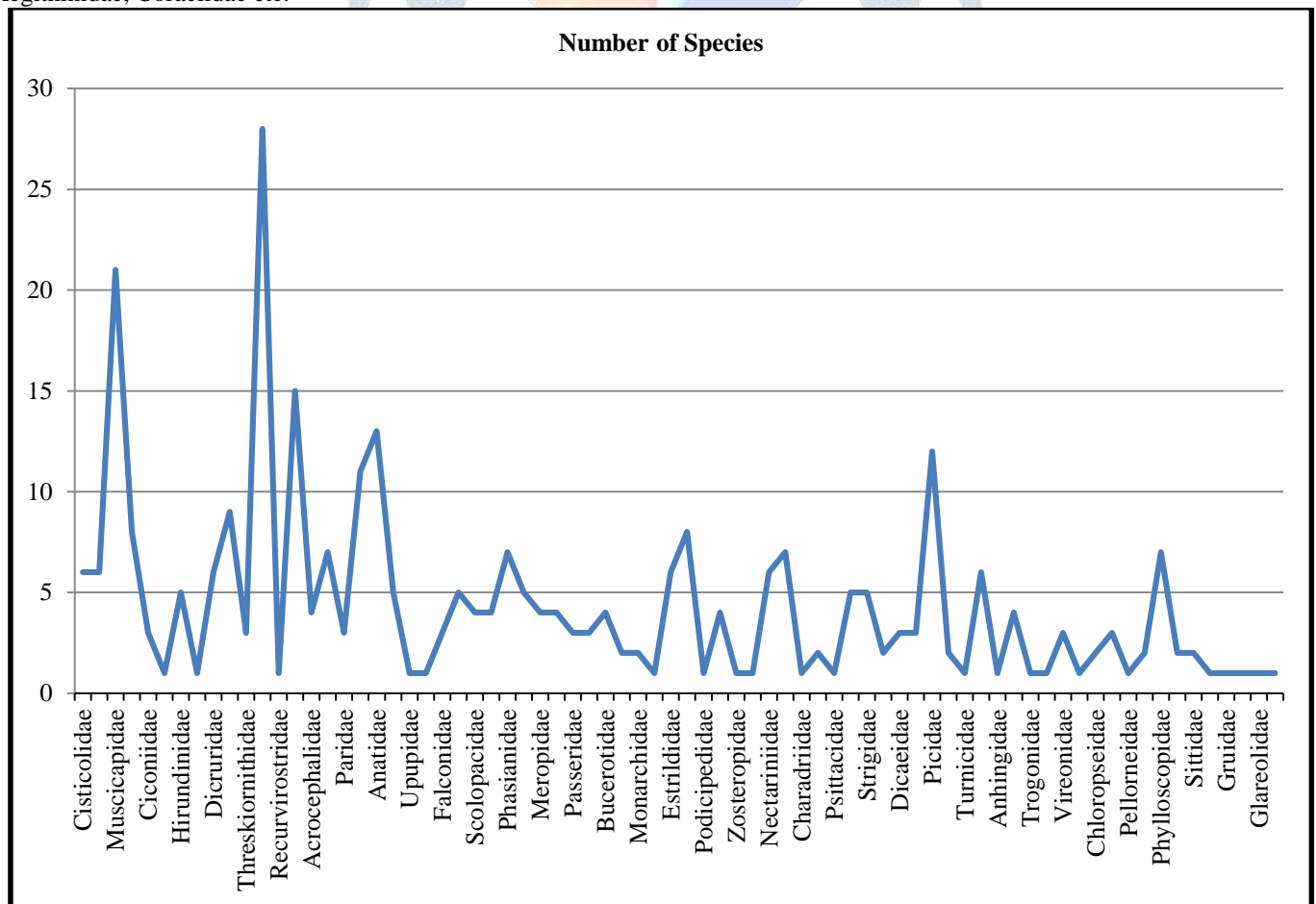
To observe birds, I used Canon 1300 D as well as Canon 200 D Mark II. The survey time was 6:00 AM to 11: AM and 3:00 PM to 7:00 PM as most of the activity of the birds were observed during this time. The survey has been done season wise as study of migratory birds visit this area in season wise. All the data after collection it was analyzed and classified according to their habitat and diversity point of view. Statistical analysis has been done after collection of all the data. For the collection of data, few areas in Maval have been selected as there is presence of rich plant diversity and water sources viz. Dam, River, Lake etc. There is daily note down of the data of the birds I observed or captured in the camera. By taking advice and help from the many ornithologists I identified birds I found in the study area. I also took the references from many reference books written by ornithologists like Dr. Salim Ali, Richerd Grimmett, Carol Inskipp, Tim Inskipp etc.

**RESULTS AND DISCUSSION:**

As per the survey I done and my observation, I collect the data of all the birds I observed. I also note down the data of the birds and categories it into various categories such as the Family wise distribution, Feeding Habit, Migration status, Habitat and IUCN status of the bird. Birds were classified on the basis of their family. It is very important to classify the avian diversity family wise. I found total 321 birds species belonging from 74 various families in which Cisticolidae, Alaudidae, Muscicapidae, Cuculidae, Ciconiidae, Accipitridae etc families have been observed.

Here I have categorized the birds on the basis of their family they belong from, on the basis of their feeding habits and habitat. I also classify them on the basis of their migration status. Following graphs represents the data I have classified from the study area. Graphs have been plot as per the data I have recorded from the last three years. Graph 1 show the classification of birds on the basis of family where graph 2 shows the classification of birds on the basis of their feeding habitat. Feeding habitat includes Insectivorous, Carnivorous, Granivorous, Omnivorous, Herbivorous, Piscivorous, Frugivorous and Nectarivorous. Graph 3 shows the classification of birds on the basis of nature of habitat. Habitat of birds includes Arboreal Habitat, Aerial habitat, Aquatic (Water Birds) habitat, Ground habitat and Shrub habitat. Graph 4 shows the classification of the birds on the basis of their migration status. Migration is playing a very vital role in the classification of birds. These four categories I used to classify the bird diversity.

In this type of category I classified all the birds I have found and total 321 birds classified into 74 families in which the family Accipitridae shows most abundant numbers of the birds that are 28. Family Muscicapidae show 21 species of bird diversity. There many families in which only one bird’s species have been found such as Ploceidae, Recurvirostridae, Upupidae, Aegithinidae, Coraciidae etc.



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