Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 4 No. 1 (January) (2026)

A Checklist of Avifauna of Khar colony Adina district Swabi Khyber Pakhtunkhwa Pakistan

Javed Khan (Corresponding Author)
Department of Zoology, Abdul Wali Khan University Mardan
Email: javedkhanbio71@gmail.com

Muhammad Asad Khan
Department of Zoology, The University of Swabi
Email: khanasad9126@gmail.com

ABSTRACT

Birds are the major component of both aquatic and terrestrial ecosystems, acting as indicators of environmental health. Ecologically, birds play a crucial role in nutrient recycling, pest controlling, pollination and the dispersal of seeds. The present study was conducted to investigate the Avifaunal diversity of Khar colony Adina of district Swabi, Khyber Pakhtunkhwa Pakistan from January 5 to December 30, 2025. Khar Colony is a small village located in the southern part of Adina and is divided into eastern and western parts by the Adina–Yar Hussain Road. The eastern part is urbanized and primarily consists of residential homes, while the western part is dominated by agricultural lands. During the field survey, a total of 100 bird species were identified, belonging to 15 orders, and 40 families. Species were recorded across urban habitats, forest, water bodies, wetlands, agricultural lands and grasslands. The most dominant order was Passeriformes (53), followed by Coraciiformes (10), Pelecaniformes (07), and Columbiformes (06). The richest family was Muscicapidae (09) followed by Motacillidae (08), Ardeidae (07) and Columbidae (06). This checklist provide a rich assemblage of migratory, resident, and passage migrant birds that indicating highest bird's diversity and heterogeneity. The present study provides baseline data essential for habitat management, conservation planning and long-term birds monitoring.

Keywords: Pollination, agricultural lands, Passeriformes, Ardeidae, Urban habitats

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 4 No. 1 (January) (2026)

Introduction

Birds are eggs lying endothermic vertebrates, belonging to class Aves that characterized by feathery skin, low weight skeleton, bipedal locomotion, a beak and forelimbs modified to wings (Campbell et al., 2018). Aves (Birds) are the most diverse and abundant group of chordates that lives and breed in all seven contents. Globally, there are approximately 10,000 bird species belongs to 29 different orders (Gill et al., 2025). They occupying a variety of different habitats, the greatest diversity found in the tropical regions. The diversity and abundance of birds in a region are closely related to habitat structure, food availability, and climatic conditions (Şekercioğlu, 2006).

Birds can vary greatly in color, shape and size, some fly, some swim, some just walk or run **(**Newton, 2023). The ecological role of birds includes nutrient recycling, pest control, pollination, seed dispersal, and also acting as indicator of environmental health. Birds are ecologically very important and play vital role in the balance ecosystem and biological environment of the universe (Sekercioglu, 2006). They are insectivores and consumed variety of insects that control the insect population and keep a balance check of insect's in particular ecosystem (James, 2007). Avifauna i.e., mynas, hoopoes, bulbuls, crows, sparrow, and wagtails are predators and consumed insects that are important friends of farmers and agriculture fields. Birds are pollinators and paly important role in natural environment that act as agents of flower pollination, seed dispersal, source of food chain and agents in breaking seed dormancy (Nason, 1992). Birds are indicator species and sensitive to environmental changes and alarm the other species about the environmental changes (Trivedi, 1999).

The birds may be carnivores (feeding on other animals), herbivores (feeding on plants), or generalists (feeding on a variety of foods). The lifestyle and feeding depends on the structure of beaks that are adapted to the type of food a bird eats (Josep del Hoyo et al., 2014). Carnivorous birds include hawks, falcons, eagles, osprey, vultures and owls while herbivorous birds include the goose, cockatoo and parrot (Gill, 2007**)**. The American Crow is an example of a generalist. The specialist is a bird (or other animal) that is specially adapted to eat a certain food. The humming bird is specialist, whose long, thin beak is excellent for reaching into flowers for nectar, but not very good for eating other foods (Grant & Grant, 2008).

Pakistan hosts more than 700 bird species, belonging to multiple biogeographic regions including Palearctic and Oriental realms that attract birds from Europe and Central Asia (Ali & Ripley, 1987). Most of birds migrates from Siberia (Russia) to the wet lands of Pakistan for searching food, building nest and protect himself from harsh winter. Globally, there are seven birds migratory zones, the most important zone is Indus fly zone located in Pakistan. Falcons, swans, geese, ducks, cranes, waders and flamingos migrate to Pakistan Indus River through Hindu Kush, Karakorum and Suleiman ranges (Ali, 2000). Unfortunately, the people do not have knowledge about the importance of wildlife in ecosystem and shoot them, including some rare bird species, with air guns or sling shot. Pakistan is Zoo geographically very unique and divided into oriental, Palearctic and Ethiopian zones that support a total of more than 650 different bird species (Beg & Qureshi 1972). But the diversity of birds decline day by day due to overhunting, pollution, habitat loss, fragmentation, climatic changes, invasiveness and lake of awareness about the wild life (Khan, 2025; Mirza & Wasiq, 2007). This study provided a basic guide line to ornithologist about the bird diversity and their management of district Swabi Khyber Pakhtunkhwa, Pakistan.

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 4 No. 1 (January) (2026)

Materials and methods

Study area

The study area for the present study was Khar colony, Adina village district Swabi Khyber Pakhtunkhwa, Pakistan. Khar colony is situated at Kara mar hill at North, Yar Hussain at the south, Kalu Khan at east and Ismailia village at the west. Khar Colony is a small village located in the southern part of Adina. The village is divided into eastern and western parts by the Adina–Yar Hussain Road. The eastern part is urbanized and primarily consists of residential homes, while the western part is dominated by agricultural lands. The study area consists of mixed habitats including: Agricultural land **(**wheat, maize, and paddy fields), Forested patches and shrubs, Streams, ponds, and wetlands**,** Grasslands and open scrub areas**,** Urban and semi-urban settlements

Field survey

The field survey was conducted from January 5 to December 30, 2025 and the observations were carried out from early morning 6.00-8.00AM and evening 4.00-6.00PM. We studied wetlands, forest, trees, agriculture areas, bank of rivers, grassy area, road sides and municipals areas. We collected Avifaunal data by using direct and indirect methods. In the direct method we visited the study area every day from morning to evening while an indirect method we interviewed the hunters, wild staff, elder peoples of the village and farmers. The number of bird species were recorded and identified through available standard Avifaunal Keys.

Data analysis

Species identification was confirmed by morphological features, plumage colour, size, call, and behaviour. All species were categorized according to standard avian taxonomy: Order, Family, Genus/Species and Common names. Bird diversity was analysed by counting: Number of species per Order, Number of species per Family, Relative abundance based on checklist frequency.

Results

The present study provides a comprehensive assessment of avifaunal diversity in Khar Colony, Adina, District Swabi, Khyber Pakhtunkhwa, Pakistan. A total of **100 bird species** were recorded during the survey period (January–December 2025), representing **15 orders and 40 families** and 100 species that indicating a highly diverse and heterogeneous bird community in the study area. The distribution of species across multiple habitat types—including urban settlements, agricultural lands, wetlands, forest patches, grasslands, and water bodies—highlights the ecological richness and habitat variability of the region (Table 1).

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 4 No. 1 (January) (2026)

Table 1. A checklist of Avifauna of Khar colony Adina district Swabi Khyber Pakhtunkhwa Pakistan

S:NO	Class	Order	Family	Species	Common name
1	Aves	Coraciiformes	Alcedinidae	*Halcyon smyrnensis*	White throated king fisher
2	Aves	Coraciiformes	Alcedinidae	*Ceryle reduis*	Pied King fisher
3	Aves	Coraciiformes	Alcedinidae	*Alcedo atthis*	Common King fisher
4	Aves	Coraciiformes	Alcedinidae	*Halcyon pileata*	Black capped king fisher
5	Aves	Coraciiformes	Alcedinidae	*Megaceryle lugubris*	Crested king fisher
6	Aves	Coraciiformes	Coraciidae	*Coracais benghalensis*	Indian roller
7	Aves	Coraciiformes	Coraciidae	*Coracais garrulus*	European roller
8	Aves	Coraciiformes	Meropidaee	*Merops philippinus*	Blue tailed bee-eater
9	Aves	Coraciiformes	Meropidae	*Merops persicus*	Blue-cheeked bee-eater
10	Aves	Coraciiformes	Meropidaee	*Merops orientalis*	Green bee eater
11	Aves	Passeriformes	Corvidae	*Corvus splendens*	House crow
12	Aves	Passeriformes	Corvidae	*Corvus corone*	Carrion crow
13	Aves	Passeriformes	Corvidae	*Dendrocitta vagabunda*	Rufous treepia
14	Aves	Passeriformes	Sturnidae	*Sturina pagodarum*	Brahminy sterling
15	Aves	Passeriformes	Sturnidae	*Sturnus vulgaris*	Common sterling
16	Aves	Passeriformes	Sturnidae	*Gracupica contra*	Indian Pied myna
17	Aves	Passeriformes	Sturnidae	*Acridotheres tristis*	Common myna
18	Aves	Passeriformes	Sturnidae	*Acridotheres ginginianus*	Bank myna
19	Aves	Passeriformes	Pycnonotidae	*Pycnonotus cafer*	Red vented bulbul
20	Aves	Passeriformes	Pycnonotidae	*Pycnonotus leucotis*	White-eared Bulbul
21	Aves	Passeriformes	Dicruridae	*Dicrurus macrocercus*	Black Drongo
22	Aves	Passeriformes	Alaudidae	*Alauda arvesis*	Eurasian Skylark
23	Aves	Passeriformes	Alaudidae	*Galerida cristata*	Crested lark
24	Aves	Passeriformes	Leiothrichidae	*Turdoides malcolmi*	Large grey babbler
25	Aves	Passeriformes	Leiothrichidae	*Turdoides caudate*	Common babbler
26	Aves	Passeriformes	Leiothrichidae	*Argya striata*	Jungle Babbler
27	Aves	Passeriformes	Dicaeidae	*Dicaeum erythrorhynchos*	Pale-billed flower pecker
28	Aves	Passeriformes	Monarchidae	*Terpsiphone paradisi*	Indian Paradise flycatcher
29	Aves	Passeriformes	Cinclidae	*Cinclus pallasii*	Brown dipper
30	Aves	Passeriformes	Laniidae	*Lanius isabellinus*	Isabelline Shrike
31	Aves	Passeriformes	Laniidae	*Lanius vittatus*	Bay-backed shrike
32	Aves	Passeriformes	Laniidae	*Lanius excubitor*	Great gray shrike
33	Aves	Passeriformes	Laniidae	*Lanius schach*	Long-tailed shrike
34	Aves	Passeriformes	Passeridae	*Passer domesticus*	House sparrow
35	Aves	Passeriformes	Motacillidae	*Motacilla alba*	White wagtail
36	Aves	Passeriformes	Motacillidae	*Motacilla flava*	Yellow wagtail
37	Aves	Passeriformes	Motacillidae	*Motacilla aguimp*	White browed wagtail

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 4 No. 1 (January) (2026)

38	Aves	Passeriformes	Motacillidae	*Motacilla cinerea*	Grey Wagtail
39	Aves	Passeriformes	Motacillidae	*Motacilla citreola*	Citrine wagtail
40	Aves	Passeriformes	Motacillidae	*Anthus similis*	Long-billed pipit
41	Aves	Passeriformes	Motacillidae	*Anthus roseatus*	Rosy pipit
42	Aves	Passeriformes	Motacillidae	*Anthus spinoletta*	Water pipit
43	Aves	Passeriformes	Muscicapidae	*Saxicola macrorhynchus*	White-browed bush Chat
44	Aves	Passeriformes	Muscicipidae	*Saxicola carprata*	Pied bush chat
45	Aves	Passeriformes	Muscicipidae	*Saxicola ferreus*	Grey Bush chat
46	Aves	Passeriformes	Muscicipidae	*Saxicola marurus*	Siberian stonechat
47	Aves	Passeriformes	Muscicapidae	*Oenanthe fusca*	Brown rock chat
48	Aves	Passeriformes	Muscicapidae	*Phoenicurus ochruros*	Black redstart
49	Aves	Passeriformes	Muscicapidae	*Luscinia svecica*	Blue throated bird
50	Aves	Passeriformes	Muscicapidae	*Copsychus saularis*	Oriental magpie-robin
51	Aves	Passeriformes	Muscicapidae	*Ficedula parva*	Red- breasted Flycatcher
52	Aves	Passeriformes	Estrildidae	*Lonchura punctulata*	Scaly breasted muina
53	Aves	Passeriformes	Ploceidae	*Ploceus philippinus*	Baya weaver
54	Aves	Passeriformes	Oriolidae	*Oriolus kundoo*	Indian golden oriole
55	Aves	Passeriformes	Oriolidae	*Oriolus oriolus*	Eurasian golden oriole
56	Aves	Passeriformes	Paridae	*Parus cinereus*	Cinereous Tit
57	Aves	Passeriformes	Nectariniidae	*Cinnyris asiaticus*	Purple sunbird
58	Aves	Passeriformes	Cisticolidae	*Prinia inornata*	Plain prinia
59	Aves	Passeriformes	Cisticolidae	*Prinia socialis*	Ashy prinia
60	Aves	Passeriformes	Hirundinidae	*Petrochelidon fluvicola*	Streak-throated swallow
61	Aves	Passeriformes	Hirundinidae	*Hirundo rustica*	Barn swallow
62	Aves	Passeriformes	Emberizidae	*Emberiza fucata*	Chestnut- eared bunting
63	Aves	Passeriformes	Zosteropidae	*Zosterops palpebrosus*	Indian white eye
64	Aves	Columbiformes	Columbidae	*Streptopelia tranquebarica*	Red collared dove
65	Aves	Columbiformes	Columbidae	*Spilopelia senegalensis*	Laughing dove
66	Aves	Columbiformes	Columbidae	*Streptopelia decaocto*	Eurasian collared dove
67	Aves	Columbiformes	Columbidae	*Streptopelia turtur*	Russian Turtle dove
68	Aves	Columbiformes	Columbidae	*Columba livia*	Rock pigeon
69	Aves	Columbiformes	Columbidae	*Columba eversmanni*	Yellow-eyed pigeon
70	Aves	Bucerotiformes	Upupidae	*Upupa epops*	Eurasian hoopoe
71	Aves	Strigiformes	Strigidae	*Athene brama*	Spotted Owlet
72	Aves	Strigiformes	Strigidae	*Athene noctua*	Little owl
73	Aves	Charadriiformes	Charadriidae	*Vanellus indicus*	Red wattled lapwing
74	Aves	Charadriiformes	Scolopacidae	*Actitis hypoleucos*	Common sand piper
75	Aves	Charadriiformes	Rostratulidae	*Rostratula benghalensis*	Greater painted-snipe

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 4 No. 1 (January) (2026)

76	Aves	Charadriiformes	Scolopacidae	*Tringa glareola*	Wood sandpiper
77	Aves	Galliformes	Phasianidae	*Coturnix coturnix*	Common quail
78	Aves	Cuculiformes	Cuculidae	*Centropus sinensis*	Greater coucal
79	Aves	Cuculiformes	Cuculidae	*Clamator jacobinus*	Jacobin/ Pied cuckoo
80	Aves	Cuculiformes	Cuculidae	*Eudynamys scolopaceus*	Asian koel
81	Aves	Psittaciformes	Psittaculidae	*Psittaacula krameri*	Rose ringed parakeets
82	Aves	Gruiformes	Rallidae	*Fulica atra*	Eurasian coot
83	Aves	Gruiformes	Rallidae	*Gallinula chloropus*	Common moorhen
84	Aves	Gruiformes	Rallidae	*Gallicrex cinerea*	Water cock
85	Aves	Gruiformes	Rallidae	*Amaurornis phoenicurus*	White-breasted water hen
86	Aves	Pelecaniformes	Ardeidae	*Ardeola grayii*	Pond heron
87	Aves	Pelecaniformes	Ardeidae	*Bubulcus ibis*	Cattle egret
88	Aves	Pelecaniformes	Ardeidae	*Egretta garzetta*	Little egret
89	Aves	Pelecaniformes	Ardeidae	*Ardea alba*	Great Egret
90	Aves	Pelecaniformes	Ardeidae	*Nycticorax nycticorax*	Black-crowned night heron
91	Aves	Pelecaniformes	Ardeidae	*Botaurus cinnamomeus*	Cinnamon bittern
92	Aves	Pelecaniformes	Ardeidae	*Ardea cinerea*	Grey heron
93	Aves	Accipitriformes	Accipitridae	*Elanus axillaris*	Black shouldered kite
94	Aves	Accipitriformes	Accipitridae	*Aquila fasciata*	Bonellis eagle
95	Aves	Accipitriformes	Accipitridae	*Milvus migrans*	Black kite
96	Aves	Accipitriformes	Accipitridae	*Tachyspiza badia*	Shikra
97	Aves	Accipitriformes	Accipitridae	*Accipiter nisus*	Eurasian Sparrowhawk
98	Aves	Anseriformes	Anatidae	*Anas platyrhynchos*	Wild duck/blue head duck
99	Aves	Podicipediformes	Podicipedidae	*Tachybaptus ruficollis*	Little grebe
100	Aves	Piciformes	Picidae	*Jynx torquilla*	Eurassain wryneck

Order-wise Diversity

Analysis of taxonomic distribution revealed that the order Passeriformes was highly dominant, contributing 53 species (53%) of the total recorded avifauna. This high representation reflects the adaptive versatility of passerine birds, which thrive in a wide range of ecological conditions, particularly in mixed landscapes such as those found in the study area. Passeriformes included a wide variety of species such as crows, mynas, sparrows, wagtails, flycatchers, and bulbuls, many of which are well adapted to human-modified environments.

The second most dominant order was Coraciiformes, comprising 10 species, primarily represented by kingfishers, bee-eaters, and rollers. These birds were commonly observed near water bodies and open agricultural fields, indicating the importance of aquatic and semi-aquatic habitats in sustaining avian diversity.

The order Pelecaniformes ranked third with 7 species, mainly consisting of herons and egrets (family Ardeidae), which were frequently recorded in wetlands and waterlogged agricultural areas. Columbiformes followed with 6 species, including pigeons and doves that were abundant in both urban and rural habitats.

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 4 No. 1 (January) (2026)

Moderately represented orders included Accipitriformes (5 species), comprising raptors such as kites, eagles, and hawks, and Charadriiformes and Gruiformes (4 species each), which were mainly associated with wetlands and marshy areas. Orders such as Cuculiformes (3 species) and Strigiformes (2 species) showed lower diversity but were still ecologically significant, representing cuckoos and owls respectively.The remaining orders—Psittaciformes, Anseriformes, Podicipediformes, Piciformes, Bucerotiformes, and Galliformes—were represented by only one species each, indicating either habitat specialization or limited occurrence within the study area (Table 2 & Figure 1).

Table 2. Order-wise Distribution of Bird Species in the Study Area

S:No	Orders	Number of species
1	Passeriformes	53
2	Coraciiformes	10
3	Pelecaniformes	7
4	Columbiformes	6
5	Accipitriformes	5
6	Charadriiformes	4
7	Gruiformes	4
8	Cuculiformes	3
9	Strigiformes	2
10	Psittaciformes	1
11	Anseriformes	1
12	Podicipediformes	1
13	Piciformes	1
14	Bucerotiformes	1
15	Galliformes	1

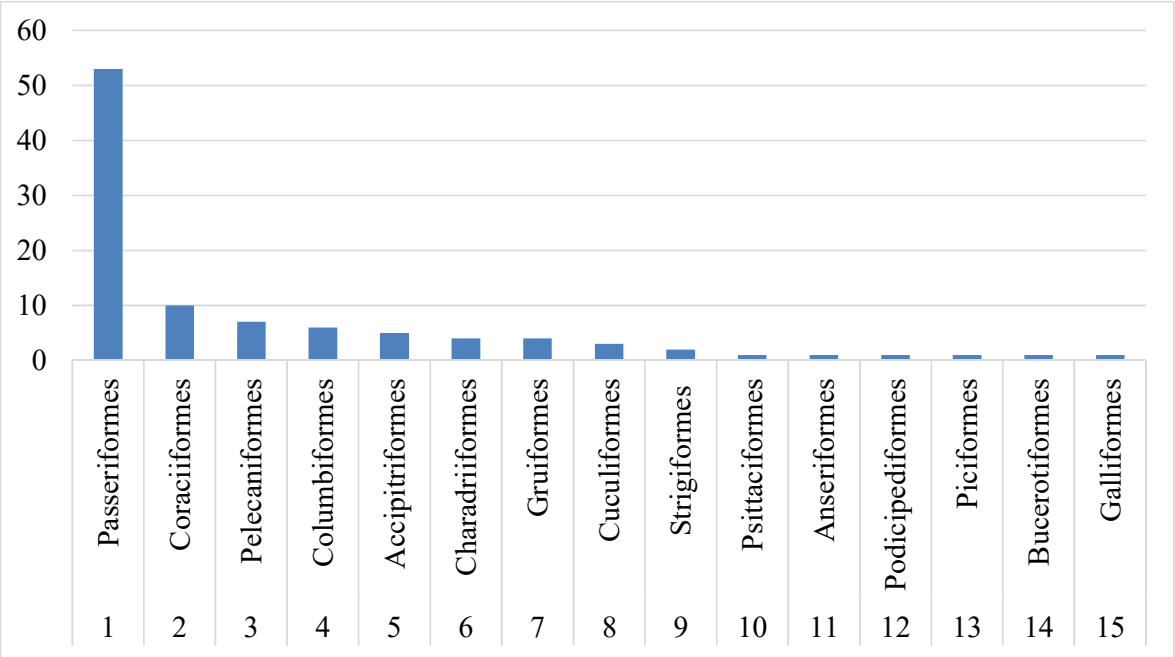

Figure 1. Order-wise Distribution of Bird Species in the Study Area

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 4 No. 1 (January) (2026)

Family-wise Diversity

Family-level analysis showed that Muscicapidae (flycatchers and chats) was the most dominant family with 9 species, followed by Motacillidae (8 species), which included wagtails and pipits. These families are typically associated with open habitats, grasslands, and agricultural fields, suggesting that such environments play a critical role in supporting avian diversity in the region.

The family Ardeidae (herons and egrets) was represented by 7 species, reflecting the presence of suitable wetland habitats. Similarly, Columbidae (6 species) showed high abundance, indicating the adaptability of pigeons and doves to both natural and human-dominated environments.

Several families exhibited moderate diversity, including Alcedinidae (5 species), Accipitridae (5 species), and Sturnidae (5 species). These groups encompass ecologically diverse birds such as kingfishers, raptors, and starlings, which occupy different trophic levels and ecological niches.

Families such as Rallidae and Laniidae (4 species each) and Corvidae, Leiothrichidae, and Cuculidae (3 species each) also contributed significantly to the overall diversity. In contrast, a large number of families (over 20) were represented by only one or two species, indicating a broad but uneven distribution of taxonomic diversity across families (Table 3 & Figure 2).

Table 3. Family -wise Distribution of Bird Species in the Study Area

Family	Species	Family	Species
Muscicapidae	9	Scolopacidae	2
Motacillidae	8	Dicruridae	1
Ardeidae	7	Dicaeidae	1
Columbidae	6	Monarchidae	1
Alcedinidae	5	Cinclidae	1
Accipitridae	5	Passeridae	1
Sturnidae	5	Estrildidae	1
Rallidae	4	Ploceidae	1
Laniidae	4	Paridae	1
Corvidae	3	Nectariniidae	1
Leiothrichidae	3	Emberizidae	1
Cuculidae	3	Zosteropidae	1
Coraciidae	2	Upupidae	1
Meropidae	3	Charadriidae	1
Pycnonotidae	2	Rostratulidae	1
Alaudiidae	2	Phasianidae	1
Oriolidae	2	Psittaculidae	1
Cisticolidae	2	Anatidae	1
Hirundinidae	2	Podicipedidae	1
Strigidae	2	Picidae	1

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 4 No. 1 (January) (2026)

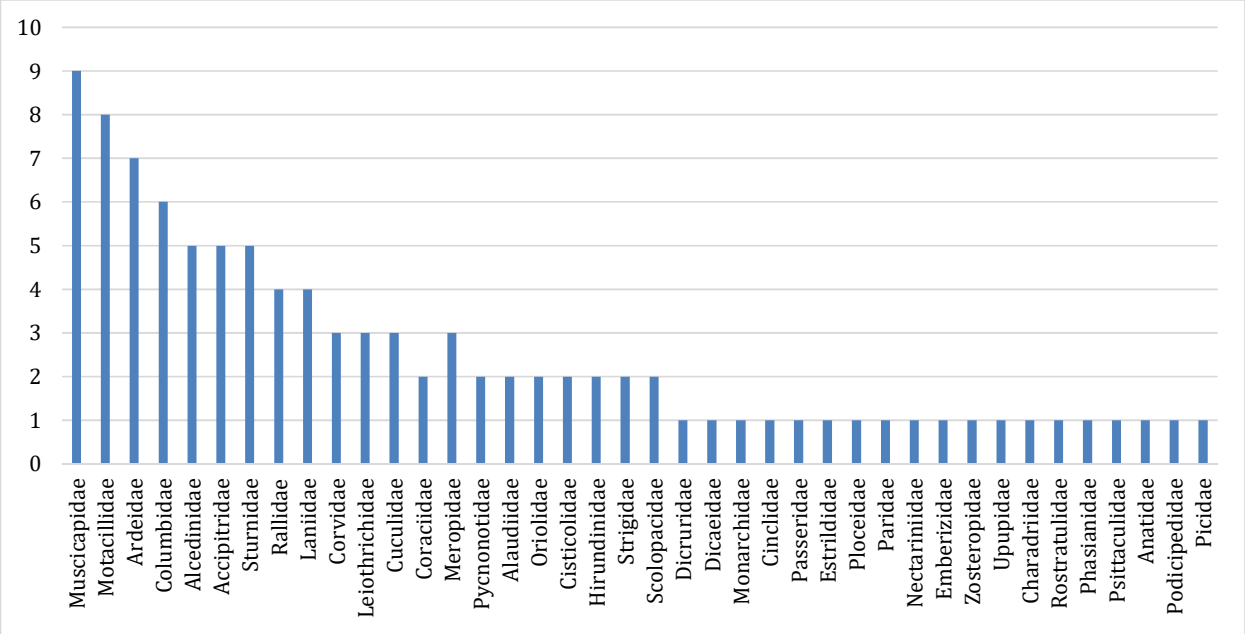

Figure 2. Family-wise Distribution of Bird Species in the Study Area

Habitat-wise Observations

The distribution of bird species across different habitat types revealed distinct patterns. Urban and semi-urban areas supported species such as house sparrow, common myna, and house crow, which are well adapted to human presence. Agricultural lands hosted a wide range of insectivorous and granivorous birds, including wagtails, pipits, and larks, benefiting from crop fields and associated food resources. Wetlands and water bodies were particularly rich in species belonging to Ardeidae, Rallidae, and Anatidae, highlighting their importance as feeding and breeding grounds. Forested patches and shrublands supported species such as babblers, bulbuls, and flycatchers, which rely on vegetation for nesting and foraging.

Species Composition and Ecological Implications

The checklist includes a mixture of resident, migratory, and passage migrant species, indicating that the study area serves as an important habitat for both local and seasonal avifauna. Migratory species, particularly those associated with wetlands, underscore the ecological significance of the region as part of broader migratory routes. The dominance of insectivorous and omnivorous birds suggests a healthy ecosystem with adequate food availability. Additionally, the presence of top predators such as raptors indicates a relatively balanced trophic structure.

Overall Diversity Pattern

The overall findings demonstrate that Khar Colony supports high avian diversity despite its relatively small geographic size. The coexistence of multiple habitat types within the area is a key factor contributing to this richness. However, the uneven distribution of species across orders and families suggests that certain groups are more adaptable and resilient to environmental changes than others. In summary, the results highlight: High species richness (100 species), Strong dominance of Passeriformes, Significant contribution of wetland-associated birds, Presence of both common and specialized species, Importance of habitat heterogeneity in maintaining diversity, These findings

ISSN Online: 3007-3154
ISSN Print: 3007-3146

provide a valuable baseline for future ecological studies, conservation planning, and biodiversity monitoring in the region.

Conclusion

The present study provides a comprehensive assessment of avifaunal diversity in Khar Colony, Adina, District Swabi, Khyber Pakhtunkhwa, Pakistan, and highlights the ecological significance of this relatively small yet heterogeneous landscape. A total of 100 bird species belonging to 15 orders and 40 families were recorded, reflecting a rich and diverse avian community supported by a mosaic of habitats including agricultural lands, wetlands, forest patches, grasslands, and urban areas.

The dominance of the order Passeriformes, along with the high representation of families such as Muscicapidae, Motacillidae, Ardeidae, and Columbidae, indicates that the study area provides favorable ecological conditions, particularly for insectivorous and omnivorous birds. The presence of wetland-associated species, raptors, and passerines further demonstrates a well-structured ecosystem with diverse trophic levels. Moreover, the occurrence of resident, migratory, and passage migrant species emphasizes the importance of the area as a seasonal refuge and part of broader migratory pathways.

Habitat heterogeneity emerged as a key factor influencing species richness and distribution. Agricultural fields and wetlands, in particular, played a vital role in sustaining bird populations by offering food resources, nesting sites, and shelter. However, increasing anthropogenic pressures such as urbanization, habitat degradation, and lack of awareness about wildlife conservation may pose future threats to this biodiversity.

In conclusion, Khar Colony represents an important avifaunal habitat in District Swabi and serves as a valuable site for biodiversity conservation. The findings of this study provide baseline data for future research, monitoring programs, and conservation strategies. Effective management practices, habitat protection, and community awareness are strongly recommended to preserve and enhance avian diversity in the region over the long term.

ISSN Online: 3007-3154
ISSN Print: 3007-3146

Vol. 4 No. 1 (January) (2026)

References

Campbell, N. A., Urry, L. A., Cain, M. L., Wasserman, S. A., Minorsky, P. V., & Reece, J. B. (2018). *Campbell biology* (11th ed.). Pearson Education.

Gill, F., Donsker, D., & Rasmussen, P. (Eds.). (2025**).** *IOC World Bird List (v15.1).* International Ornithologists' Union.

Şekercioğlu, Ç. H. (2006). Increasing awareness of avian ecological function. *Trends in Ecology & Evolution, 21*(8), 464–471. https://doi.org/10.1016/j.tree.2006.05.007

Newton, I. (2003). *The Speciation and Biogeography of Birds*. Academic Press.

Clements, J. F. (2007). *The Clements checklist of birds of the world* (6th ed.). Cornell University Press.

Nason, I. (1992). *Discovering birds* (pp. 67–69). Pisces Publications.

Trivedi, P. R. (1999). Wildlife reserves and national parks in India. In *Encyclopedia of ecology and environment* (pp. 23–25). Indian Institute of Ecology and Environment.

Del Hoyo, J., Elliott, A., & Christie, D. A. (Eds.). (2014). *Handbook of the birds of the world alive*. Lynx Edicions.

Gill, F. B. (2007). *Ornithology* (3rd ed.). W.H. Freeman.

Grant, P. R., & Grant, B. R. (2008). *How and Why Species Multiply: The Radiation of Darwin's Finches*. Princeton University Press.

Ali, S. & Ripley, S.D., 1987**.** *A Pictorial Guide to the Birds of the Indian Subcontinent*. Bombay: Bombay Natural History Society.

Ali, S. (2000). The book of Indian birds (13th ed.). Oxford University Press.

Beg, M. A., & Qureshi, J. J. (1972). Birds and their habitats in the cultivated areas of Lyallpur district and vicinity. Pakistan Journal of Agricultural Sciences, 9, 161–166.

Mirza, Z. B., & Wasiq, H. (2007). A field guide to birds of Pakistan.

Khan, J. (2025). Ornithological survey of district Swabi, Khyber Pakhtunkhwa, Pakistan. Biological Times, 4(5), 13–15.