

Status of Avifauna of Bala Qila Reserve Forest, Alwar (Rajasthan)

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ABSTRACT

Bala Qila Reserve Forest is situated at 5 Km. South West of Alwar city, Rajasthan. A fort, known as Bala Qila, is situated at 27°34'28" N latitude, 76°35'16" E longitude and about 1867 feet above msl. It is included in the Buffer Area of Critical Tiger Habitat (CTH) of Sariska Tiger Reserve.

India is one of the 12 'mega diverse' nations of the World. About 13% of the world's birds were found in India. The avifauna in the Bala Qila Reserve Forest is also very rich. Total 38 families, 78 genera and 99 species were recorded in this forest. The most represented families are Corvidae, Passeridae, Muscicapidae, Sylviidae, Accipitridae, Sturnidae, Phasianidae, Ardeidae and Columbidae with 9, 8, 7, 7, 6, 5, 4, 4 and 4 species respectively. Among the commonly sighted birds in the study area are Peafowl, Yellow footed green pigeon, Kingfishers, Golden Backed Woodpeckers, Owls, Quails, Partridges, Tree Pies, Crested Serpent Eagles, Parakeets, Sunbirds and Bulbul.

Major threats to birds are habitat loss and climate Change. So, proper conservation of habitat of study area is essential.

Keywords: *Bala Qila, Biodiversity, Avifauna, Critical Tiger Habitat, Reserve forest.*

INTRODUCTION

India is one of the 12 'mega diverse' nations of the World. The Indian subcontinent, a part of the vast Oriental biogeographical region, is very rich in biodiversity. Out of the more than 9000 birds of the world, the Indian subcontinent contains about 1300 species, or about 13% of the world's birds¹.

Bala Qila Reserve Forest is a part of Nidani Reserve Forest (Forest Department, Alwar). A fort named "Bala Qila" is situated in this region. One of the unique features of this forest is that, it is surrounded by a high wall (Parkota). Hence, it has been considered as the most protected forest area in this region. However, undisturbed area inside the parkota is about 2 square Kilo meter². A one way metalled road, which leads to Bala Qila, passes through this forest. Nidani Reserve Forest is included in the Buffer Area of Critical Tiger Habitat (CTH) of Sariska Tiger Reserve³. The avifauna in the Bala Qila Reserve Forest is also very rich. Present study deals with the status of avian fauna of Bala Qila Reserve Forest. A few attempts have been made to study the flora of this reserve forest² but it is the first attempt to find out the status of the avian fauna of Bala Qila Reserve Forest.

It is being suggested that the avifauna are important for the ecosystem, as they play various roles as scavengers, pollinators and predators of insect pest. Major threats to birds are habitat loss and climate Change. The bioindicators of different kind of environment like urbanization and industrialization disturb the avian habitats. Anthropogenic activities like fire wood collection, livestock grazing and improper management are also the major threats to the avian habitats. So, proper conservation of habitat of study area is essential.

STUDY AREA

Bala Qila Reserve Forest (BQRF) is situated at 5 Km. South West of Alwar city, Rajasthan. A fort, known as Bala Qila, is situated at 27°34'28" N latitude, 76°35'16" E longitude and about 1867 feet above msl. BQRF extends about three miles from North to South and one miles from East to West with a circumference of seven miles⁴. The Bala Qila forest consists of mainly two parallel running West-facing and East-facing slopes opposed to each other with very narrow valley between the two. This valley is closed on the South and opens in the North with a huge South facing slope at its mouth.

The climate of the study area is semi-arid and very hot in summer and extremely cold in winter. The monsoon season is of very short duration. The vegetation of Bala Qila forest is tropical dry deciduous forests type according to the classification of forests⁵. Dhok (*Anogeissus pendula*) is the dominant tree species with other tree layer and shrub layer in the reserve forest. *Boswellia serreta* and *Lannea coromandelica* grow on rocky patches. Scrub thorny dense forest in the valleys². Bala Qila reserve forest offers the best habitat for the birds that make this place their home.

MATERIAL AND METHODS

Observations were made during January 2012 to December 2014. Regular surveys were done by systematically walking on fixed routes through the study area. The birds were observed during the peak hours of their activity from 06 AM–10 AM and from 16 PM –18 PM with the aid of 10×50 Nikon binoculars and GPS. However, opportunistic records were also collected during other time periods of the day. Birds seen were recorded along with habitat type, season and frequency of sightings of a particular species. Photographs were taken whenever possible with the help of cannon camera. Identification of birds was done using field guides^{6,7,8}. The checklist was prepared using standard common and scientific names of the birds⁹.

OBSERVATION AND RESULTS

Bala Qila Reserve Forest is rich in avian species diversity. Ninety nine bird species were recorded from study area in the surveyed period, which is listed in Table 1. Total 38 families, 78 genera and 99 species were recorded in this forest. The most represented families are Corvidae, Passeridae, Muscipidae, Sylviidae, Accipitridae, Sturnidae, Phasianidae, Ardeidae and Columbidae with 9, 8, 7, 7, 6, 5, 4, 4 and 4 species respectively. This is the first record in Bala Qila Reserve Forest which shows good avian diversity.

Table:-1 Check-list of avifauna in the Bala Qila Reserve forest

S. NO.	FAMILY	SCIENTIFIC NAME	COMMON NAME	FIELD STATUS
1	<i>Accipitridae</i>	<i>Elanus caeruleus</i>	Black-shouldered Kite (Black-winged Kite)	R
2	<i>Accipitridae</i>	<i>Milvus migrans</i>	Black Kite (Pariah Kite)	R
3	<i>Accipitridae</i>	<i>Neophron percnopterus</i>	Egyptian Vulture	R
4	<i>Accipitridae</i>	<i>Accipiter badius</i>	Shikra	R
5	<i>Accipitridae</i>	<i>Butastur teesa</i>	White - eyed Buzzard	R
6	<i>Accipitridae</i>	<i>Aquila clanga</i>	Greater Spotted Eagle	RW
7	<i>Alaudidae</i>	<i>Mirafra cantillans</i>	Singing Bushlark	R
8	<i>Alaudidae</i>	<i>Mirafra erythroptera</i>	Indian Bushlark (Red-winged Bushlark)	R
9	<i>Alcedinidae</i>	<i>Alcedo atthis</i>	Common Kingfisher (Small Blue)	R
10	<i>Apodidae</i>	<i>Apus affinis</i>	House Swift	R

11	Ardeidae	<i>Egretta garzetta</i>	Little Egret	R
12	Ardeidae	<i>Casmerodius albus</i>	Great Egret (Large Egret)	Rw
13	Ardeidae	<i>Bubulcus ibis</i>	Cattle Egret	R
14	Ardeidae	<i>Ardeola grayii</i>	Indian Pond Heron	R
15	Bucerotidae	<i>Ocyrceros birostris</i>	Indian Grey Hornbill	R
16	Burhinidae	<i>Burhimus oediconemus</i>	Eurasian Thick-Knee (Stone Curlew)	R
17	Caprimulgidae	<i>Caprimulgus indicus</i>	Grey Nightjar (Indian Jungle)	R
18	Centropodidae	<i>Centropus sinensis</i>	Greater Coucal (Crow-Pheasant)	R
19	Cerylidae	<i>Ceryle rudis</i>	Pied Kingfisher (Lesser Pied)	R
20	Charadriidae	<i>Vanellus indicus</i>	Red-wattled Lapwing	R
21	Cisticolidae	<i>Prinia socialis</i>	Ashy Prinia	R
22	Cisticolidae	<i>Prinia inornata</i>	Plain Prinia	R
23	Columbidae	<i>Columba livia</i>	Rock Pigeon (Blue Rock Pigeon)	R
24	Columbidae	<i>Streptopelia senegalensis</i>	Laughing Dove (Little Brown)	R
25	Columbidae	<i>Streptopelia decaocto</i>	Eurasian Collared Dove (Indian Ring)	R
26	Columbidae	<i>Treron phoenicoptera</i>	Yellow-footed Green Pigeon (Yellowlegged Green Pigeon)	R
27	Coraciidae	<i>Coracias benghalensis</i>	Indian Roller	R
28	Corvidae	<i>Dendrocitta vagabunda</i>	Rufous Treepie (Indian Treepie)	R
29	Corvidae	<i>Corvus splendens</i>	House Crow	R
30	Corvidae	<i>Corvus macrorhynchos</i>	Large-billed Crow (Jungle Crow)	W
31	Corvidae	<i>Oriolus oriolus</i>	Eurasian Golden Oriole	R
32	Corvidae	<i>Pericrocotus cinnamomeus</i>	Small Minivet	R
33	Corvidae	<i>Rhipidura aureola</i>	White-browed Fantail (Flycatcher)	R
34	Corvidae	<i>Dicrurus macrocercus</i>	Black Drongo	R
35	Corvidae	<i>Dicrurus caerulescens</i>	White-bellied Drongo	R
36	Corvidae	<i>Terpsiphone paradisi</i>	Asian Paradise- Flycatcher	R
37	Cuculidae	<i>Clamator jacobinus</i>	Pied Cuckoo (Pied Crested)	P
38	Cuculidae	<i>Cuculus micropterus</i>	Indian Cuckoo	R
39	Cuculidae	<i>Eudynamys scolopacea</i>	Koel, Asian Koel	R
40	Fingillidae	<i>Melophus lathami</i>	Crested Bunting	R
41	Halcyonidae	<i>Halcyon smyrnensis</i>	White-throated Kingfisher (Whitebreasted Kingfisher)	R
42	Hirundinidae	<i>Hirundo rustica</i>	Barn Swallow	RW
43	Hirundinidae	<i>Hirundo smithii</i>	Wire-tailed Swallow	R
44	Hirundinidae	<i>Hirundo daurica</i>	Red-rumped Swallow	RW
45	Laniidae	<i>Lanius vittatus</i>	Bay-backed Shrike	R
46	Laniidae	<i>Lanius schach</i>	Long-tailed Shrike (Rufous-backed)	R
47	Laniidae	<i>Lanius excubitor</i>	Grey Shrike	R
48	Megalaimidae	<i>Megalaima haemacephala</i>	Coppersmith Barbet (Crimson-breasted Barbet)	R
49	Meropidae	<i>Merops orientalis</i>	Green Bee-eater	R
50	Meropidae	<i>Merops philippinus</i>	Blue-tailed Bee-eater	R

51	<i>Muscicapidae</i>	<i>Cyornis tickelliae</i>	Tickell's Blue Flycatcher	R
52	<i>Muscicapidae</i>	<i>Culicicapa ceylonensis</i>	Grey-headed Canary Flycatcher	r
53	<i>Muscicapidae</i>	<i>Luscinia svecica</i>	Blue throat	W
54	<i>Muscicapidae</i>	<i>Copsychus saularis</i>	Oriental Magpie- Robin	R
55	<i>Muscicapidae</i>	<i>Saxicoloides fulicata</i>	Indian Robin	R
56	<i>Muscicapidae</i>	<i>Phoenicurus ochruros</i>	Black Redstart	rW
57	<i>Muscicapidae</i>	<i>Cercomela fusca</i>	Brown Rock-Chat	R
58	<i>Nectariniidae</i>	<i>Nectarinia asiatica</i>	Purple Sunbird	R
59	<i>Paridae</i>	<i>Parus major</i>	Great Tit (Grey Tit)	R
60	<i>Passeridae</i>	<i>Passer domesticus</i>	House Sparrow	R
61	<i>Passeridae</i>	<i>Petronia xanthocollis</i>	Chestnut-shouldered Petronia (Yellow-throated Sparrow)	R
62	<i>Passeridae</i>	<i>Motacilla alba</i>	White Wagtail (Pied Wagtail)	rW
63	<i>Passeridae</i>	<i>Motacilla maderaspatensis</i>	White-browed Wagtail (Large Pied Wagtail)	R
64	<i>Passeridae</i>	<i>Motacilla flava</i>	Yellow Wagtail	W
65	<i>Passeridae</i>	<i>Anthus trivialis</i>	Tree Pipit	rW
66	<i>Passeridae</i>	<i>Piceus philippinus</i>	Baya Weaver	R
67	<i>Passeridae</i>	<i>Lonchura malabarica</i>	Indian Silverbill (White-throated Munia)	R
68	<i>Phasianidae</i>	<i>Francolinus pondicerianus</i>	Grey Francolin (Grey Partridge)	R
69	<i>Phasianidae</i>	<i>Perdica asiatica</i>	Jungle Bush Quail	R
70	<i>Phasianidae</i>	<i>Galloperdix lunulata</i>	Painted Spurfowl	R
71	<i>Phasianidae</i>	<i>Pavo cristatus</i>	Indian Peafowl	R
72	<i>Picidae</i>	<i>Dendrocopos nanus</i>	Brown-capped Pygmy Woodpecker	R
73	<i>Picidae</i>	<i>Dendrocopos mahrattensis</i>	Yellow-crowned Woodpecker	R
74	<i>Picidae</i>	<i>Dinopium benghalense</i>	Black-rumped Flameback (Lesser Goldenbacked Woodpecker)	R
75	<i>Psittacidae</i>	<i>Psittacula eupatria</i>	Alexandrine Parakeet	R
76	<i>Psittacidae</i>	<i>Psittacula krameri</i>	Rose-ringed Parakeet	R
77	<i>Psittacidae</i>	<i>Psittacula cyanocephala</i>	Plum-headed Parakeet (Blossomheaded Parakeet)	R
78	<i>Pteroclididae</i>	<i>Pterocles exustus</i>	Chestnut-bellied Sandgrouse (Indian Sandgrouse)	R
79	<i>Pycnonotidae</i>	<i>Pycnonotus leucotis</i>	White-eared Bulbul (White-cheeked Bulbul)	R
80	<i>Pycnonotidae</i>	<i>Pycnonotus cafer</i>	Red-vented Bulbul	R
81	<i>Rallidae</i>	<i>Amaurornis phoenicurus</i>	White-breasted Water hen	R
82	<i>Strigidae</i>	<i>Otus bakkamoena</i>	Collared Scops Owl	R
83	<i>Strigidae</i>	<i>Athene brama</i>	Spotted Owlet	R
84	<i>Strigidae</i>	<i>Asio flammeus</i>	Short- eared Owl	w
85	<i>Sturnidae</i>	<i>Sturnus pagodarum</i>	Brahminy Starling (Black-headed Myna)	R
86	<i>Sturnidae</i>	<i>Sturnus roseus</i>	Rosy Starling (Rosy Pastor)	WP
87	<i>Sturnidae</i>	<i>Sturnus contra</i>	Asian Pied Starling	R
88	<i>Sturnidae</i>	<i>Acridotheres tristis</i>	Common Myna	R
89	<i>Sturnidae</i>	<i>Acridotheres ginginianus</i>	Bank Myna	R

90	<i>Sylviidae</i>	<i>Orthotomus sutorius</i>	Common Tailorbird	R
91	<i>Sylviidae</i>	<i>Phylloscopus collybita</i>	Common Chiffchaff (Brown Leaf Warbler)	W
92	<i>Sylviidae</i>	<i>Chrysomma sinense</i>	Yellow-eyed Babbler	R
93	<i>Sylviidae</i>	<i>Turdoides caudatus</i>	Common Babbler	R
94	<i>Sylviidae</i>	<i>Turdoides malcolmi</i>	Large Grey Babbler	R
95	<i>Sylviidae</i>	<i>Turdoides striatus</i>	Jungle Babbler	R
96	<i>Sylviidae</i>	<i>Sylvia curruca</i>	Lesser Whitethroat	W
97	<i>Tytonidae</i>	<i>Tyto alba</i>	Barn Owl	R
98	<i>Upupidae</i>	<i>Upupa epops</i>	Hoopoe, Common Hoopoe	RW
99	<i>Zosteropidae</i>	<i>Zosterops palpebrosus</i>	Oriental White-eye	R

(R = widespread resident, r = very local resident, W = widespread winter visitor, w = sparse winter visitor, P = widespread migrant, p = sparse migrant)

Table-2: Number of families, genera and species recorded in BQRF

S.No.	Family	No. of genera	No. of species
1	Accipitridae	6	6
2	Alaudidae	1	2
3	Alcedinidae	1	1
4	Apodidae	1	1
5	Ardeidae	4	4
6	Bucerotidae	1	1
7	Burhinidae	1	1
8	Caprimulgidae	1	1
9	Centropodidae	1	1
10	Cerylidae	1	1
11	Charadriidae	1	1
12	Cisticolidae	1	2
13	Columbidae	3	4
14	Coraciidae	1	1
15	Corvidae	7	9
16	Cuculidae	3	3
17	Fingillidae	1	1
18	Halcyonidae	1	1
19	Hirundinidae	1	3
20	Laniidae	1	3
21	Megalaimidae	1	1
22	Meropidae	1	2
23	Muscicapidae	7	7
24	Nectariniidae	1	1
25	Paridae	1	1
26	Passeridae	6	8
27	Phasianidae	4	4
28	Picidae	2	3
29	Psittacidae	1	3
30	Pteroclididae	1	1
31	Pycnonotidae	1	2
32	Rallidae	1	1
33	Strigidae	3	3
34	Sturnidae	2	5
35	Sylviidae	5	7
36	Tytonidae	1	1
37	Upupidae	1	1
38	Zosteropidae	1	1
	TOTAL	78	99

CONCLUSION

The present work establishes the richness of the Bala Qila Reserve Forest in respect of bird fauna which are excellent indicators of ecological health. Major threats to birds are habitat loss and climate Change. Major threats to habitat loss are overgrazing, fuel wood collection, poaching and tourism in BQRF. This area is located near Alwar city. They put enormous pressure on the reserve forest for fuel wood collection. Illegal grazing is also a constant problem. BQRF is easily accessible so, there is also tremendous tourist pressure.

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