



Avifauna diversity of Sadashiv Nagar: Belgaum city, Karnataka, India

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This paper deals with an assessment of avifauna diversity and their migratory status in Sadashiv nagar of Belagavi city in North Karnataka, India. A weekly observation from September 2011 to August 2013 for the period of 2 years resulted in documentation of 75 bird species belongs to 16 orders, 39 families and 65 genera. Passeriformes alone represent 59% of the total bird species recorded followed by Ciconiformes (5%) and Columbiformes (5%). Among the families Cistcolidae and Motacillidae consists maximum (5 species each) number of bird species followed by Ardeidae, Columbidae and Muscicapinae (4 species each). Out of total bird species recorded 35% found as resident, 29% were local migratory, 9% were winter visitor and 1% were summer visitor and rare.

Keywords: Sadashiv Nagar, Karnataka, Cistcolidae, Motacillidae, Avifauna diversity

INTRODUCTION

Indian subcontinent represents 1350 plus bird species consisting resident, migratory, rare, exotic, native, endangered and endemic birds. Karnataka supports 500 plus bird species with 48 were listed in threatened category. Further, avifauna diversity of South Karnataka is well documented (Ali 1942ab, 1943abc; Srinivasa et al. 1997; Aravind et al. 2001; Nazneen et al. 2001). Pande et al. (2003) documented the birds from Western Ghats, Kokan, Goa and Malabar region. There is scanty information available on bird diversity of North Karnataka. Recently, Donar et al. (2012) documented 49 bird species from Nippani reservoir and, Patil and Hiragond (2012) recorded 86 bird species from Shettilhalli in Belagavi district. Since, there is no published report on bird diversity of Belagavi city. It was planned to assess the avifauna diversity and

their migratory status in Sadashiv nagar of Belagavi city.

MATERIALS AND METHODS

Study Area

Belagavi city (15°52'N; 74°34'E) is situated nearly 762 m asl in North Karnataka, India. It receives around 1000 mm annual rain fall and temperature ranges from 10 to 34°C. Study area consist gardens, temporary ponds and rice paddy fields in outskirts of Sadashiv nagar along the Vengurla road. It also consist acacia plants, some patches of grass land, shrubs and several fruiting tree represented by almond, jack, mango, coconut, ficus, tamarind etc.

Method:

Regular weekly observations were made in different parts of the study area from September 2011 to August 2013 for the period of 24 months to record avifauna diversity. Study area was explored travelling on two wheeler vehicle as well as on foot. Birds were sighted during their peak activity from 6.30 to 10.30 hrs and 16.00 to 19.00 hrs. Birds sighted by opportunistic sighting are also added to the checklist. The birds were directly observed by 10

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x 50 X Olympus binocular and identified using field guides by Ali (2002) and Grimmett et al. (2011). Some of the birds were photographed for identification. The Common and scientific names of birds are followed after Grimmett et al. (2011). Migratory status of birds was categorized in to resident –R (Birds recorded around the year), local migratory –LM (Birds showing local movements), winter visitor –WV (Birds recorded during winter), summer visitor –SV (Birds recorded during summer) and rare –Ra (Bird recorded only once during the study period). Status of threatened category of birds is adopted from BirdLife International (2013) and IUCN Red List of Threatened Species (2013).

OBSERVATIONS AND DISCUSSION

During the above study period Common pigeon *Columba livia* were regularly sighted around the year in 10-100 individual flocks whereas single Common hoopoe *Upupa epops* was sighted only once on April 7th, 2012 at 17.30 hrs. Rests of the birds were sighted singly / in pair / in 3-5 individual flocks. Above said survey resulted in documentation of 75 bird species belongs to 16 orders, 39 families and 65 genera (Table 1). This amounts to around 15% of the total bird species found in Karnataka. In present assessment Passeriformes contribute 59% (44) of

the total bird species recorded followed by Ciconiiformes and Columbiformes (4 bird species each). Falconiformes, Charadriiformes and Coraciiformes represent 3 bird species each; Cuculiformes, Strigiformes, Apodiformes and Piciformes consists 2 bird species each; Anseriformes, Podicipediformes, Gruiformes, Psittaciformes, Upupiformes and Bucerotiformes represent least (1) number of bird species (Figure 1). Among the families each of Cistridae and Motacillidae represents 7% (5 bird species) of the total bird species recorded followed by Ardeidae, Columbidae and Muscicapinae representing 5% (4 bird species) each. The detailed family wise bird species recorded are listed in table 2. All the birds recorded are least concerned. Southern Coucal *Centropus parroti* and Dusky Crag Martin *Ptyonoprogne concolor* were not assessed for threatened category of IUCN (IUCN, 2013; BirdLife International, 2013). Study area consist 35 (47%) resident bird species and 29 (39%) local migratory bird species showing local movements. Among the migratory bird species 9 (12%) were winter visitor and Black-headed Cuckooshrike *Coracina melanoptera* is summer visitor. Since, Common Hoopoe *Upupa epops* sighted once during the study period considered as rare (Figure 2).

Figure-1. Order wise number of bird species recorded in Sadashiv Nagar : Belagavi city.

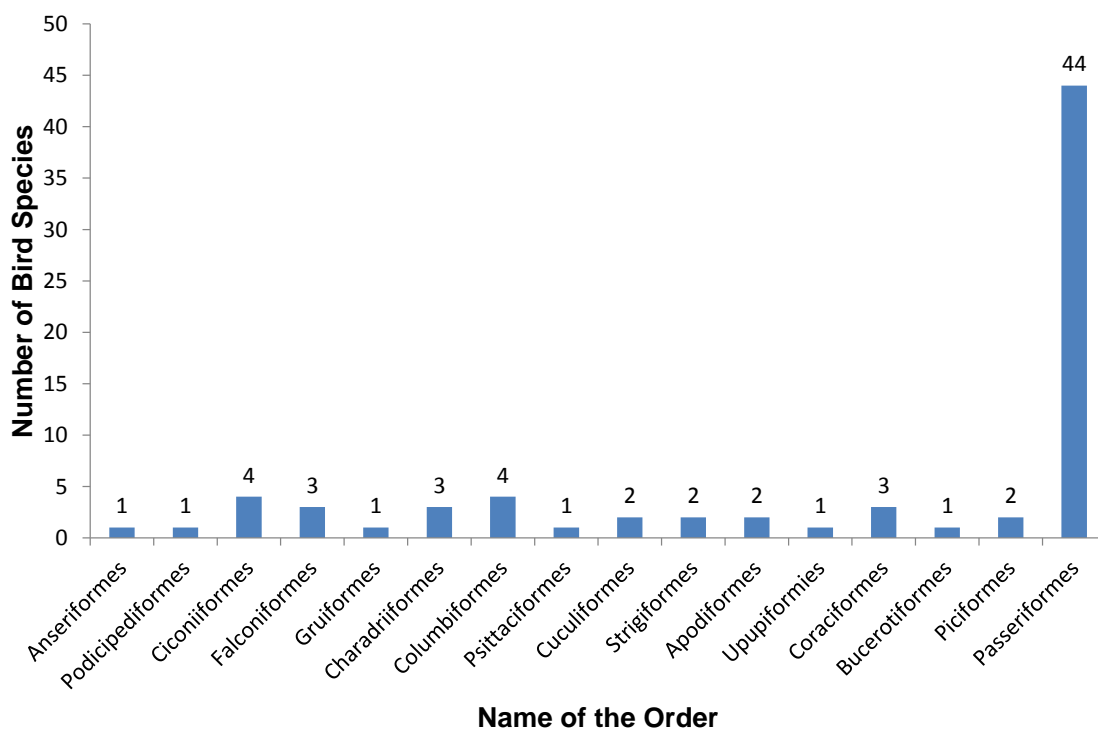


Table- 1. Showing avifauna diversity recorded in Sadashiv nagar of Belagavi city

Sl. No.	Order/Family	Common Name	Scientific Name	Migratory Status
	1. Order ANSERIFORMES			
1	1. Anatidae	Indian Spot-billed Duck	<i>Anas poecilorhyncha</i>	LM
	2. Order PODICIPEDIFORMES			
2	2. Podicipedidae	Little Grebe	<i>Tachybaptus ruficollis</i>	LM
	3. Order CICONIIFORMES			
3	3.Ardeidae	Indian Pond Heron	<i>Ardeola grayii</i>	R
4		Cattle Egret	<i>Bubulcus ibis</i>	R
5		Intermediate Egret	<i>Mesophoyx intermedia</i>	R
6		Little Egret	<i>Egretta garzetta</i>	WV
	4. Order FALCONIFORMES			
7	4 .Accipitridae	Brahminy Kite	<i>Haliastur indus</i>	R
8		Black Kite	<i>Milvus migrans</i>	R
9		Black-winged Kite	<i>Elanus caeruleus</i>	R
	5. Order GRUIFORMES			
10	5.Rallidae	White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	R
	6. Order CHARADRIIFORMES			
11	6.Charadriidae	Red-wattled Lapwing	<i>Vanellus indicus</i>	R
12		Little Ringed Plover	<i>Charadrius dubius</i>	LM
13	7.Scolopacidae	Common Sandpiper	<i>Actitis hypoleucos</i>	WV
	7. Order COLUMBIFORMES			
14	8.Columbidae	Common Pigeon	<i>Columba livia</i>	R
15		Laughing Dove	<i>Stigmatopelia senegalensis</i>	R
16		Spotted Dove	<i>Stigmatopelia chinensis</i>	LM
17		Red Collared Dove	<i>Streptopelia tranquebarica</i>	LM
	8. Order PSITTACIFORMES			
18	9.Psittacidae	Rose-ringed Parakeet	<i>Psittacula krameri</i>	R
	9. Order CUCULIFORMES			
19	10.Cuculidae	Asian Koel	<i>Eudynamis scolopaceus</i>	R
20		Southern Coucal	<i>Centropus parroti</i>	R
	10. Order STRIGIFORMES			
21	11.Strigidae	Indian Eagle Owl	<i>Bubo bengalensis</i>	R
22		Spotted Owlet	<i>Athene brama</i>	R
	11. Order APODIFORMES			
23	12.Apodidae	Asian Palm Swift	<i>Cypsiurus balasiensis</i>	LM
24		Indian Swiftlet	<i>Collocalia unicolor</i>	LM
	12. Order UPUPIFORMES			
25	13.Upupidae	Common Hoopoe	<i>Upupa epops</i>	RA
	13. Order CORACIFORMES			
26	14.Coraciidae	Indian Roller	<i>Coracias benghalensis</i>	LM
27	15.Halcyonidae	White-throated Kingfisher	<i>Halcyon smyrnensis</i>	R
28	16.Meropidae	Green Bee-eater	<i>Merops orientalis</i>	LM
	14. Order BUCEROTIFORMES			
29	17.Bucerotidae	Indian Grey Hornbill	<i>Ocyrceros birostris</i>	LM
	15. Order PICIFORMES			
30	18.Ramphastidae	White-cheeked Barbet	<i>Megalaima viridis</i>	R
31		Coppersmith Barbet	<i>Megalaima haemacephala</i>	R
	16. Order PASSERIFORMES			
32	19.Aegithinidae	Common Iora	<i>Aegithina tiphia</i>	LM
33	20.Campephagidae	Black-headed Cuckooshrike	<i>Coracina melanoptera</i>	SV
34		Small Minivet	<i>Pericrocotus cinnamomeus</i>	LM
35		Orange Minivet	<i>Pericrocotus flammeus</i>	LM
36	21.Laniidae	Common Woodshrike	<i>Tephrodornis pondicerianus</i>	LM
37		Long -tailed Shrike	<i>Lanius schach</i>	R

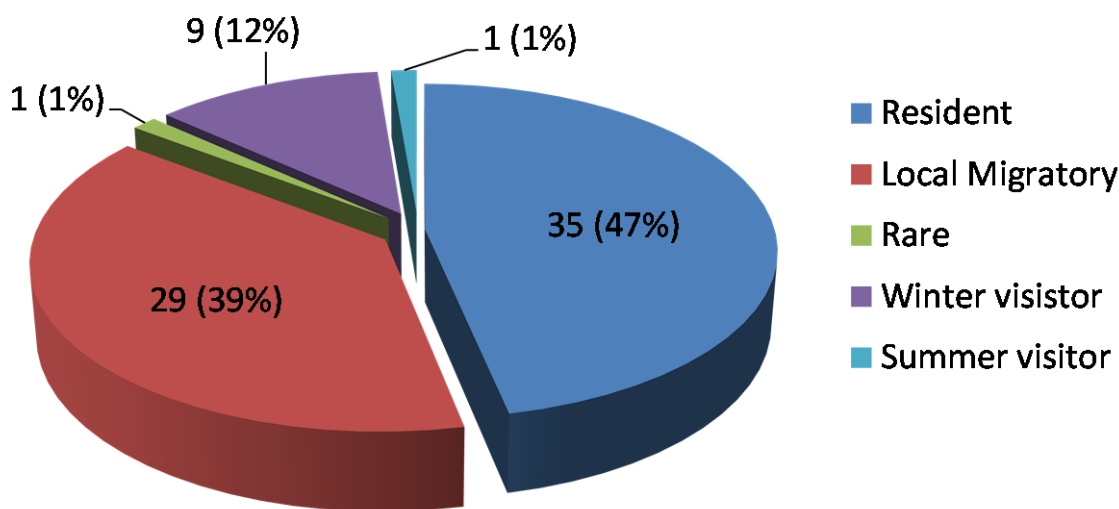
Sl. No.	Order/Family	Common Name	Scientific Name	Migratory Status
38	22.Dicruridae	Black Drongo	<i>Dicrurus macrocercus</i>	LM
39	23.Oriolidae	Indian Golden Oriole	<i>Oriolus kundoo</i>	WV
40	24.Rhipiduridae	White-browed Fantail	<i>Rhipidura aureola</i>	LM
41	25.Corvidae	House Crow	<i>Corvus splendens</i>	R
42		Indian Jungle Crow	<i>Corvus culminatus</i>	R
43	26.Paridae	Great Tit	<i>Parus major</i>	LM
44	27.Hirundinidae	Dusky Crag Martin	<i>Ptyonoprogne concolor</i>	LM
45		Red-rumped Swallow	<i>Cecropis daurica</i>	LM
46		Wire-tailed Swallow	<i>Hirundo smithii</i>	LM
47	28.Alaudidae	Oriental skylark	<i>Alauda gulgula</i>	LM
48	29.Pycnonotidae	Red-vented Bulbul	<i>Pycnonotus cafer</i>	R
49		Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	R
50	30.Cisticolidae	Ashy Prinia	<i>Prinia socialis</i>	R
51		Grey-breasted Prinia	<i>Prinia hodgsonii</i>	R
52		Zitting Cisticola	<i>Cisticola juncidis</i>	R
53		Common Tailorbird	<i>Orthotomus sutorius</i>	LM
54		Greenish Warbler	<i>Phylloscopus trochiloides</i>	WV
55	31.Zosteropidae	Oriental White-eye	<i>Zosterops palpebrosus</i>	LM
56	32.Sturnidae	Brahminy Starling	<i>Sturnia pagodarum</i>	R
57		Common Myna	<i>Acridotheres tristis</i>	R
58		Rosy Starling	<i>Pastor roseus</i>	WV
59	33.Muscicapinae	Oriental Magpie Robin	<i>Copsychus saularis</i>	R
60		Indian Robin	<i>Saxicoloides fulicatus</i>	R
61		Pied Bushchat	<i>Saxicola caprata</i>	R
62		Red-breasted Flycatcher	<i>Ficedula parva</i>	WV
63	34.Irenidae	Golden-fronted Leafbird	<i>Chloropsis aurifrons</i>	LM
64		Jerdon's Leafbird	<i>Chloropsis jerdoni</i>	LM
65	35.Dicaeidae	Pale-billed Flowerpecker	<i>Dicaeum erythrorhynchos</i>	R
66	36.Nectariniidae	Purple-rumped Sunbird	<i>Leptocoma zeylonica</i>	R
67		Purple Sunbird	<i>Cinnyris asiaticus</i>	R
68		Little Spiderhunter	<i>Arachnothera longirostra</i>	R
69	37.Passeridae	House Sparrow	<i>Passer domesticus</i>	R
70	38.Estrildidae	Scaly-breasted Munia	<i>Lonchura punctulata</i>	LM
71	39.Motacillidae	Grey Wagtail	<i>Motacilla cinerea</i>	WV
72		White-browed Wagtail	<i>Motacilla maderaspatensis</i>	LM
73		Yellow Wagtail	<i>Motacilla flava</i>	WV
74		Citrine Wagtail	<i>Motacilla citreola</i>	WV
75		Paddyfield Pipit	<i>Anthus rufulus</i>	LM

Note: Migratory status - R: Resident, LM: Local migratory, RA: Rare, WV: Winter visitor, SV: Summer visitor

Table- 2. Showing family wise bird species recorded in Sadashiv nagar of Belagavi city

Sl. No.	Name of the Family	Number of bird species recorded	Sl. No.	Name of the Family	Number of bird species recorded
1	Anatidae	1	21	Laniidae	2
2	Podicipedidae	1	22	Dicruridae	1
3	Ardeidae	4	23	Oriolidae	1
4	Accipitridae	3	24	Rhipiduridae	1
5	Rallidae	1	25	Corvidae	2
6	Charadriidae	2	26	Paridae	1
7	Scolopacidae	1	27	Hirundinidae	3
8	Columbidae	4	28	Alaudidae	1
9	Psittacidae	1	29	Pycnonotidae	2
10	Cuculidae	2	30	Cistcolidae	5
11	Strigidae	2	31	Zosteropidae	1
12	Apodidae	2	32	Sturnidae	3
13	Upupidae	1	33	Muscicapinae	4
14	Coraciidae	1	34	Irenidae	2
15	Halcyonidae	1	35	Dicaeidae	1
16	Meropidae	1	36	Nectariniidae	3
17	Bucerotidae	1	37	Passeridae	1
18	Ramphastidae	2	38	Estrildidae	1
19	Aegithinidae-	1	39	Motacillidae	5
20	Campephagidae	3		Total	75

Figure-2. Migratory status of bird species recorded in Sadashiv nagar: Belagavi city



Study area supports breeding activities to Red-whiskered Bulbul, Red-vented Bulbul, House crow and Black Kite. It is also noticed that, paired Black Kite showing their regular activities around the nest on a tree top from last 2 and 1/2 years indicating the birds using same nest year after year. Present assessment reveals that, Passeriformes dominating the bird community in the study area. This is due to the fruiting trees, flowering plants in gardens, temporary ponds, grassland patches supporting

frugivorous and insectivorous birds. The anthropogenic activities such as rapid urbanization mainly construction of residential, educational and commercial buildings in city leading to habitat loss i.e. permanent disappearance of wetland bodies and grass land patches, removal of trees for widening of roads etc. These activities become a major threat to avifauna biodiversity. Thus, there is an urgent need to take some measures to conserve wetlands bodies, gardens with flowering and fruiting trees and grass land patches in city to support avifauna.

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Conflict of Interests

The authors declare that there is no conflict of interests regarding the publication of this paper.

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