

Study of Bird Diversity from Shukryacharya Hills and Its Surrounding Areas Dist. Sangli MS

Suvarna More¹, Swapnil Patil²

¹Professor .and Head Department of Zoology P.V.P.Mahavidyalaya Kavate Mahankal

²Assistant Professor, Department of Botany P.V.P. Mahavidyalaya Kavate Mahankal

Abstract

The survey of Bird diversity was carried out from the Shukryacharya hills is one of the pilgrim localities in Sangli district of Maharashtra located on the boundaries of Khanapur-Atpadi Tahsil. This locality has also been recognized as a sacred grove. The area has two valleys with top hill point of Bhavani Mandir. Shukryacharya is the highest peak of Sangli district. This area is of low rainfall with hills and slopes with some bushy plants, grass and trees. The study was carried out from years September 2019 to August 2023. The nearby areas were largely agricultural. The principal crops taken being jawar, groundnut, sugarcane and grapes. On a smaller scale bananas are also grown. Birds play important role in biodiversity by keeping insect pest under control. The irrigation land which play very important role to maintain the bird diversity. This region shows good number of bird diversity during the month of September to December. This is because of availability of food and breeding ground.

Keywords: Shukryacharya, Bird and Diversity

Introduction

The birds are vertebrates has been described as a Feathered Biped. They are warm blooded animals (homeotherms). To assist in maintaining an even temperature, the body of a bird is covered with non-conducting feathers. Birds enjoy a wide distribution on the earth than any other class of animal. Birds are useful to human community such as destroyers of insect pests, as destroys of other vermin, as scavengers, as flower pollination agents, as seed dispersers, as food for man, feathers in cottage industry, and as fertilizer [12]. The comparative study of birds reveal that there are recognizable differences in size, coloration and other details in those species which range over a wide area live under diversified natural conditions. Aynalem S and Bekele A. studied the species composition, relative abundance, and distribution of bird fauna of riverine and wetland habitats of Infranz and Yiganda at the southern tip of Lake Tana, Ethiopia [5]. Engelen D. [6] reported comparing avifauna communities and bird functional diversity of forest and farmland in southwest Ethiopia. According to Waltert M et al [18] granivorous birds showed the highest species numbers in annual cultures and were significantly fewer species-rich in other habitat types.

Shukryacharya hills is one of the pilgrim localities in Sangli district of Maharashtra located on the boundaries of Khanapur-Atpadi Tahsil. This area shows southern-tropical thorn forest. It shows plains at top, and hills and valleys at downside. The area is covered by different kinds of plants where trees are dominated. A scientific study of this locality was carried out during last 3 years by regular visits. The study reveals that this area is rich in different kinds of animals like reptiles, birds and mammals. Some

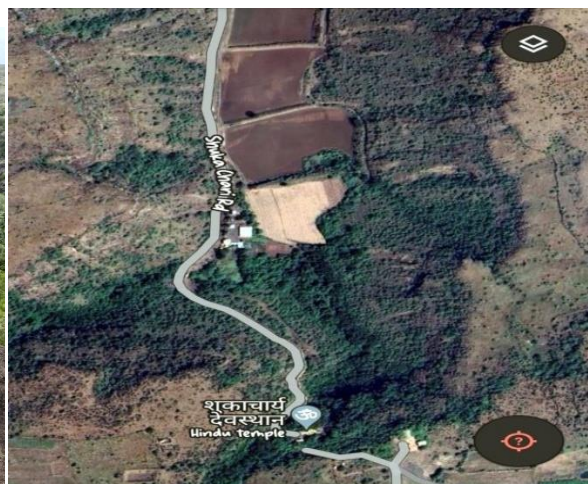
animals were common in occurrence while others were noticed only when keen field observations were made. The presence of animal diversity indicated that this area will become a tourist place in future. The different vegetation forms like herbs, shrubs and trees provide significant parameters for bird diversity. This tropical area provides natural and varied ecological habitat for birds. The area provides nesting beds as tall trees for birds. Shukryacharya hills is one of the most important ecological localities in southern Maharashtra, hence it is necessary to protect and maintain the diversity of the area. The main crop of this region is Sugarcane, grapes, groundnut, chillies and cereals. This region is mainly dominated by different plant species such as Acacia, Azadiracta, Tectona, Albizzia, Bamboo, Erythrina, Beutia, Terminalia, Eucalyptus, Lantena, Mangifera, Morinda, Tamarindus, Ficus and with different weeds. Hence support sustainable place for Avifauna. The vegetation cover of the field within the survey area was studied during the bird survey. The hills has also a continuous natural water resource of good drinking water quality. The area receives rain during June to September ranging from 300-400 mm. The temperature ranges from 20°C-45°C. Due to good tree cover, even in summer coolness is noticed at downward side of hills. Ecological conditions favors growth of many herbs, shrubs and trees, which are significant for biological diversity. The plant diversity is helpful for animals of different kind. During rainy season the entire area shows green cover due to plant growth. The best season to visit the hills is from July to September. The area is visited by pilgrims on every Monday in the month of August.

Methods and Materials

The study was conducted and taxonomic list of avifauna was recorded during the period of September 2019 to August 2023. The survey was carried out every month of year encompassing both wet and dry seasons. The habitat, behavior of birds and movements and identification marks was observed by using binocular (Olympus 8- 16x4) zoom DPS 1 and eyes and also through sound. Identification was visual except in some rare cases when the voice will be used if the bird cannot be seen. Identification and categorization of birds to their respective taxonomic groups were done by following field guide books. 'The book of Indian Birds' by Salim Ali, A Field Guide to the Birds of India by Krys Kazmierczak, Birds by Herbert S. Zim, 'Birds of the Indian Subcontinent' Richard Grimmett *et.al.*[1], [2], [3], [9], [10], [11], [12], [13],[14].

Study Area: Shukracharya hills are located 47 K/16 on top sheet map at 170°13'N latitude and 740°45'E longitude in southern Maharashtra. Shukryacharya hills show an area of about 500 acres having scrubby thorn-tropical forest.

Shukracharya hills



Results

A systemic and scientific study of this vital 'sacred grooves' is carried out for first time in relation to bird diversity. Shukryacharya hills show typical animal diversity of varied and unique nature. During present study, different bird species were recorded are as follows, (88 species belonging 74 genera from 44 families). They are Resident of local (R), Migrant (M), Endangered (E) and Local Migrant (LM).

Sr No	Scientific Name	Common Name	Status
1	FAMILY – Accipitridae		
	i) <i>Pernis Ptilorhyncus</i>	Oriental honey buzzard	R
	ii) <i>Haliastur indus</i>	Brahminy kite	R
	iii) <i>Milvus migrans</i>	Indus Black kite	R
	iv) <i>Accipeter badius</i>	Shikra	R
	v) <i>Spizaetus limnaetus</i>	Changeable hawk eagle	LM
	vii) <i>Halcyon smyrnensis</i>	White throated kingfisher	R
	viii) <i>Alcedo atthis</i>	Common kingfisher	R
	ix) <i>Accipeter nisus</i>	Eurasian sparrow hawk	M
2	FAMILY –Aegithinidae		
	i) <i>Aegithinia tiphia</i>	Common iora	R
3	FAMILY –Alaudidae		
	i) <i>Eremopterix griseos</i>	Ashy crowned finch lark	R
	ii) <i>Galerida malabarica</i>	Malabar crested lark	R
	iii) <i>Ammomanes phoenicura</i>	Rufous tailed lark	R
4	FAMILY-Apodidae		
	i) <i>Apus affinis</i>	House swift	R
5	FAMILY- Ardeidae		
	i) <i>Egretta alba</i>	Great egret	R
	ii) <i>Egretta intermedia</i>	Intermediate egret	R
	iii) <i>Egretta garzetta</i>	Little egret	R
	iv) <i>Bubulcus coromandus</i>	Cattle egret	R
	v) <i>Ardea cinerea</i>	Grey heron	R
	vi) <i>Ardeola grayii</i>	Indian pond heron	R
6	FAMILY- Bucerotidae		
	i) <i>Ocyeros birostris</i>	Indian grey hornbill	R
7	FAMILY- Capitonidae		
	i) <i>Megalaima haemacephala</i>	Copersmith barbet	R
8	FAMILY –Campephagidae		
	i) <i>Pericrocotus cinnamomeous</i>	Small minivet	R
	ii) <i>Tephrodornis pondicerianus</i>	Common wood shrike	R
9	FAMILY- Charadriidae		
	i) <i>Vanellus malabaricus</i>	Yellow wattled lapwing	R
	ii) <i>Vanellus indicus</i>	Red wattled lapwing	R

	iii) <i>Charadius dubius</i>	Little ringed plover	R
10	FAMILY –Ciconiidae		
	i) <i>Ciconia episcopus</i>	White necked stork	R
11	FAMILY –Cisticolidae		
	i) <i>Prinia socialis</i>	Ashy prinia	R
	ii) <i>Prinia inornata</i>	Plain prinia	R
	iii) <i>Orthotomus sutorius</i>	Common tailor bird	R
	iv) <i>Prinia hodgsonii</i>	Grey breasted prinia	R
12	FAMILY- Columbidae		
	i) <i>Streptopelia chinesis</i>	Spotted dove	R
	ii) <i>Columbo livia</i>	Rock pigeon	R
	iii) <i>Streptopelia capicola</i>	Ring necked dove	R
13	FAMILY- Corcaciidae		
	i) <i>Coracias benghalensis</i>	Indian roller	R
14	FAMILY- Corvidae		
	i) <i>Corvus splendens</i>	House crow	R
	ii) <i>Corvus culminatus</i>	Indian jungle crow	R
15	FAMILY – Cuculidae		
	i) <i>Cacomantis passerinus</i>	Grey bellied cuckoo	LM
	ii) <i>Clamator jacobinus</i>	Pied cuckoo	LM
	iii) <i>Eudynamys scolopaceous</i>	Asian koel	R
16	FAMILY-Dicruridae		
	i) <i>Dicrurus leucophaeus</i>	Black drongo	R
17	FAMILY-Dicaeidae		
	i) <i>Dicaeum erythrorhynchos</i>	Thick billed flower picker	R
	ii) <i>Dicaeum agile</i>	Pale billed flower picker	R
18	FAMILY – Hirundinidae		
	i) <i>Hirundo smithii</i>	Wire tailed swallow	R
	ii) <i>Hirund daurica</i>	Red -rumped swallow	R
19	FAMILY- Laniidae		
	i) <i>Lanius schach</i>	Long tailed shrike	R
	ii) <i>Lanius cristatus</i>	Brown shrike	M
20	FAMILY- Leiothrichidae		
	i) <i>Turdoides malcolmi</i>	Large grey babbler	R
21	FAMILY-Emberizidae		
	i) <i>Emberiza melanocephala</i>	Black headed bunting	M
	ii) <i>Melophus lathamii</i>	Crested bunting	R
22	FAMILY-Estrildidae		
	i) <i>Lonchura punctulata</i>	Scaly breasted munia	R
	ii) <i>Euodica malabarica</i>	Indian silver bill	R
23	FAMILY- Glareolidae		
	i) <i>Cursorius coromandelicus</i>	Indian courser	R

24	FAMILY –Muscicapidae		
	i) <i>Copsychus saularis</i>	Oriental magpie robin	R
	ii) <i>Luscini brunnea</i>	Indian robin	R
	iii) <i>Saxicola torquatus</i>	Common stone chat	R
25	FAMILY-Meropidae		
	i) <i>Merops orientalis</i>	Green bee eater	R
26	FAMILY -Motacillidae		
	i) <i>Motacilla alba</i>	White wagtail	M
	ii) <i>Motacilla cinerea</i>	Grey wagtail	M
	iii) <i>Motacilla flava</i>	Yellow wagtail	M
	iv) <i>Anthus rufulus</i>	Paddy field pipit	R
27	FAMILY –Nectariniidae		
	i) <i>Leptocoma zeylonica</i>	Purple rumped sunbird	R
	ii) <i>Cinnyris asiaticus</i>	Purple sunbird	R
28	FAMILY-Paridae		
	i) <i>Parus major</i>	Great tit	R
29	FAMILY --Passeridae		
	i) <i>Passer domesticus</i>	House sparrow	R
30	FAMILY –Pandionidae		
	i) <i>Pandion halietus</i>	Osprey	M
31	FAMILY –Ploceidae		
	i) <i>Ploceus philippinus</i>	Baya weaver	R
32	FAMILY –Phasianidae		
	i) <i>Pavo cristatus</i>	Indian peafowl	R
	ii) <i>Coturnix coturnix</i>	Common quail	R
33	FAMILY-Phalacrocoracidae		
	i) <i>Phalacrocorax carbo</i>	Great cormorant	R
	ii) <i>Phalacrocorax x Niger</i>	Little cormorant	R
34	FAMILY - Picidae		
	i) <i>Dendrocopos mahrattensis</i>	Yellow crowned woodpecker	R
35	FAMILY- Psittacidae		
	ii) <i>Psittacula krameri</i>	Rose ringed parakeet	R
36	FAMILY -Recurvirostridae		
	i) <i>Himantopus himantopus</i>	Black winged stilt	M
37	FAMILY-Rhipiduridae		
	i) <i>Rhipidura albicoilis</i>	White throated fantail	R
	ii) <i>Amaurornis phoenicurus</i>	White breasted water hen	R
38	FAMILY - Sturnidae		
	i) <i>Pastor roseus</i>	Starling /Rosy pastor	LM
	ii) <i>Acridotheres tristis</i>	Indian myna	R
	iii) <i>Sturnia pagodarum</i>	Brahminy myna	R
39	FAMILY- Strigidae		

	i) <i>Athene brama</i>	Spotted owlet	R
40	FAMILY-Scolopacidae		
	ii) <i>Tringa glarerala</i>	Wood Sandpiper	M
	iii) <i>Actitis hypoleucos</i>	Common Sandpiper	R
41	FAMILY - Threskiornithidae		
	ii) <i>Pseudibis papillosa</i>	Red naped ibis	R
42	FAMILY- Tytonidae		
	i) <i>Tyto alba</i>	Common Barn owl	R
43	FAMILY-Upupidae		
	i) <i>Upupa epops</i>	Common hoopoe	R
44	FAMILY-Zosteropidae		
	i) <i>Zosterops palpebrosus</i>	Oriental white eye	R

Discussion

Shukryacharya hills is an important locality for the birds because of natural set up. The area shows plains, valleys and hilly regions with different plant communities. They include naturally occurring herbs, shrubs and trees. Many birds are reported associated with different plants for their nesting as well as for residence. The study reveals that Shukryacharya hills is a good natural habitat for several bird species. Hence, necessary measures should be taken to maintain this important ecological area. This survey shows that there is wider range of major species from Shukryacharya hills and its surrounding areas. There are four different types of birds identified such as Resident of local (R), Migrant (M), Endangered (E) and Local Migrant (LM). The percentage of – Resident - 0.68%, Migrant - 0.22%, and Local migrant - 0.09%. After going to the checklist it is very clear that both terrestrial (land) and aquatic birds from Shukryacharya hills and its surrounding were represents 44 Families, 74 Genera and 88 Species counted as a rich Biodiversity. Some species are endangered and frequently visit to this region because of natural resources available in terms of shelter, food and breeding grounds.

Out of 88 species recorded in this study, the highest were insectivorous, followed by granivorous, nectarivorous, omnivorous, carnivores and frugivorous. About 40% birds were insectivorous, this might be due to the best adapter of this feeding guild to the human-modified agricultural area. A high abundance of granivores bird species also reported because of seasonal variation in food source where farmers plow farm land and annual crop species bloom during wet and rainy season. This proves that this region supports good number of birds because of availability of different food items, shelter, resting grounds as well as peaceful and protective land. It is obvious that resident and local migrant birds dominate the avifauna in this region. Particularly in the study area, the conservation value of agro forestry for avifauna has not been well documented. Most studies are limited to this study area.

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