

A Study on Diversity of Avifauna in Sanaghagara Forest, Keonjhar, Odisha

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Abstract

The paper reports on the status of avifaunal diversity of Sanaghagara forest ecosystem. The diversity was studied from July 2008 to June 2013 in the particular forest ecosystem, Keonjhar, Odisha, India on the basis of observational method. This forest is inhabited by a variety of resident birds and migratory birds. A total of 71 birds were recorded representing 33 families. Highest number of egrets, common myna and common crows were recorded in three seasons namely pre- monsoon, monsoon and post monsoon.

Keywords: Biodiversity, Avifauna, Sanghagara forest ecosystem.

Introduction

Healthy biodiversity is a healthy indicator of an ecosystem. Today, a drastic decline in biodiversity has been observed in different parts of the world in an alarming rate. The destruction in different forms such as degradation, fragmentation or outright loss prompted mainly by several factors such as poverty, demographic factors, inadequate policies and economic incentives, anthropogenic activities such as overgrazing, deforestation, bushfires, shifting cultivation, developmental activities like mining, urbanisation and road construction inside the protected areas are found to be the major causes of loss in biodiversity. Documentation, conservation and finding protection strategies of biodiversity is considered to be one of the important challenges in present day conservation, biological research and policy making process. In view of the above background, some studies on species diversity have been undertaken (Romer, 1949; Burger and Gochfeld, 1991).

Birds are ideal bio-indicators and useful models for studying a variety of environmental problem (Newton, 1995). As more attention

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is now being given to conservation monitoring and ecological studies of bio-indicators, avifauna warrants a closer examination in forest ecosystem. Birds become the dominant life form on the planet during late Cretaceous (63 million-135 million years ago) and modern bird groups appeared in Tertiary times, during the last 63 million years of Coenozoic era. Since investigation on avifauna in Keonjhar district is inadequate, the present study was undertaken to enlist and evaluate the status of avifauna in hill forest of Sanaghagara in Keonjhar district of Odisha state.

Methodology

Weekly field visits were made from July 2008 to June 2013 to survey avian diversity in

Table 1: Avifauna of Sanaghagara forest, Keonjhar

Non-Passerine Birds				
Sl No	Family	Common Name	Scientific Name	Status
11	Pelecanidae	Spotted belled pelican	<i>Pelecanus philippensis philippensis</i>	M
12	Phalacrocoracidae	i. Large cormorant	<i>Phalacrocorax corbo sinensis</i>	R
		ii. Little cormorant	<i>P.niger</i>	R
13	Ardeidae	i. Eastern grey heron	<i>Ardea cinerea rectirostris</i>	R
		ii. Little green heron	<i>Butorides striatus javanicus</i>	R
		iii. Cattle egret	<i>Bubulcus ibis coromandus</i>	R
		iv. Little egret	<i>Egretta garzetta</i>	R
		v. Night heron	<i>Nycticorax nycticorax nycticorax</i>	R
14	Ciconiidae	i. Painted stork	<i>Mycteria leucocephala</i>	R
		ii. Openbill stork	<i>Anastomus oscitanus</i>	R
		iii. White-necked stork	<i>Ciconia episcopus episcopus</i>	R
		iv. Black necked stork	<i>Ephippiorhynchus asiaticus asiaticus</i>	R
		v. Lesser adjutant stork	<i>Leptoptilos javanicus</i>	R
		vi. Greater adjutant stork	<i>L. dubius</i>	R
15	Threskiornithidae	i. White ibis	<i>Threskiornis aethiopia melanocephala</i>	R
		ii. Eurasian spoonbill	<i>Platalea leucorodia major</i>	R
16	Phoenicopteridae	Lesser flamingo	<i>Phoeniconaias minor</i>	R
17	Accipitridae	i. Pariah kite	<i>Myiurus migrans govinda</i>	R
		ii. Brahminy kite	<i>Haliastur indus indus</i>	R
18	Falconidae	Indian kestrel	<i>Falco tinnunculus objuragatus</i>	M
19	Phasianidae	Indian red jungle fowl	<i>Gallus gallus murghi</i>	R
10	Charadriidae	i. Indian little ringed plover	<i>Charadrius jerdoni</i>	M
		ii. Eastern golden plover	<i>Pluvialis dominica</i>	M
11	Scolopacidae	i. Common red shank	<i>Tringa totanus tetanus</i>	M
		ii. Common sand piper	<i>T. hypoleucos</i>	M
12	Recurvirostridae	Indian blackwinged stilt	<i>Himantopus himantopus himantopus</i>	R
		i. Indian blue rock pigeon	<i>Columba livia intermedia</i>	R
13	Columbidae	ii. Hill pigeon	<i>Columba rupestris</i>	R
		iii. Indian ring dove	<i>Streptopelia decaocto decaocto</i>	R
		iv. Indian spotted dove	<i>S.chinesis suratensis</i>	R
		i. Large Indian parakeet	<i>Psittacula eupatria nipalensis</i>	R
14	Psittacidae	ii. Rose ringed parakeet	<i>P.krameri minillensis</i>	R
		i. Indian koel	<i>Eudynamis scolopacea scolopacea</i>	R
15	Cuculidae	ii. Common crow-pheasant	<i>Centropus sinensisf</i>	R
		iii. Indian cuckoo	<i>Sinensis cuculus micropterus</i>	R
		Indian Palm Swift	<i>Cypsiurus parvus balasensis</i>	R
16	Alcedinidae	i. Indian pied kingfisher	<i>Ceryle rudis leucomelanura</i>	R
		ii. Indian small blue kingfisher	<i>Alcedo atthis bengalensis</i>	R
		iii. Brown-headed stork-billed kingfisher	<i>Pelargopsis amauroptem</i>	R
		iv. Black-capped kingfisher	<i>Halcyon pileata</i>	R
17	Meropidae	i. Bluetailed bee-eater	<i>Merops philippinus philippinus</i>	M
		ii. Indian small bee-eater	<i>M. orientalis orientalis</i>	R
18	Coraciidae	Blue jay	<i>Coracias benghalensis</i>	R
19	Tytonidae	Barn owl	<i>Tyto alba</i>	M
20	Strigidae	i. Great horned owl	<i>Bubo bubo</i>	R
		ii. Brown-fish owl	<i>Ketupa zeylonensis</i>	R
		iii. Forest eagle owl	<i>Bubo nipalensis</i>	R
21	Capitoniidae	Crimson-throated barbet	<i>Megalaima rubricapilla</i>	M
22	Picidae	i. Northern golden-backed woodpecker	<i>Dinopium benghalense benghalense</i>	R
		ii. Yellow fronted pied woodpecker	<i>Picoides mahrattensis magrattensis</i>	R
		iii. Indian fulvous-breasted pied woodpecker	<i>P.macei macei</i>	R

Passerine Birds				
Sl No	Family	Common Name	Scientific Name	Status
01	Pittidae	Indian pitta	<i>Pitta brachyura brachyuran</i>	R
02	Alaudidae	i. Bengal bush lark	<i>Mirafra assamica assamica</i>	R
		ii. Indian small skylark	<i>Alauda gulgula gulgula</i>	R
03	Oriolidae	Black headed oriole	<i>Oriolus xanthornus</i>	R
04	Dicruridae	King crow or south indian black drongo	<i>Dicrurus macrocercus</i>	R
		i. Grey-headed myna	<i>Sturnus malabaricus malabaricus</i>	R
05	Sturnidae	ii. Indian pied myna	<i>S. contra contra</i>	R
		iii. Indian myna	<i>Acridotheres tristis tristis</i>	R
		i. Indian house crow	<i>Corvus splendens splendens</i>	R
06	Corvidae	ii. Indian jungle crow	<i>C. macrorhynchos culminates</i>	R
		i. Black headed Bulbul	<i>Pycnonotus atriceps atriceps</i>	R
07	Pycnonotidae	ii. Odisha redvented bulbul	<i>P. cafer wetmorei</i>	R
		i. Odisha Jungle babbler	<i>Timalia striatus orissae</i>	R
08	Muscicapidae	ii. Odisha white throated Fantail flycatcher	<i>Rhipidura albicollis orissae</i>	R
		iii. Indian tailor bird	<i>Orthotomus guzumatus</i>	R
		i. Indian purple rumped sunbird	<i>Nectarinia zeylonica sola</i>	R
09	Nectarinidae	ii. Indian purple sunbird	<i>N. asiatica asiatica</i>	R
		i. Indian house sparrow	<i>Passer domesticus indicus</i>	R
10	Ploceidae	ii. Indian baya	<i>Ploceus philippinus philippinus</i>	R
		iii. White-throated munia	<i>Lonchura malabarica malabarica</i>	R

Footnote: R-Resident, M-Migratory

the entire terrestrial site. The study site, Sanaghagara forest is located in the district Keonjhar which is between 21°1'-22°10' N latitude and 85°11'-86°22' E longitude. Sanaghagara, one of the most significant and alluring natural scenic spots of Odisha, deserves its weightage validity and importance because of assemblage of species congregation and species diversity.

In Sanaghagara, nature has epitomized that beauties of pulsating tropical forest, hypnotic rhythm of rolling hills and rich valleys, sylvan glory on red and saffron soil, playful brooks amid rocky glans, crystal pools, cascading rapids and gorgeous falls, and azure blue sky are unmistakable picturesque and awe inspiring. The birds can be recorded by line transect method. Binoculars were used for watching of birds. Birds were identified by referring to the standard keys (Baker, 1928; Peters, 1937; Arthur 1961; Ali and Ripley, 1978; Samanth, 1985; Grimmett *et al*, 1988; Newton, 1994; Newton, 1995; Ali, 1996; Pandav, 1997; Oswini, 1999; Perlo, 2000; Ramitha and Vijayalakhmi, 2001; Ali, 2002; Rasmussen and Anderton, 2005; Naik *et al*, 2011; Jude Sekar, 2012). Bird population was observed and documented every weekend in

the early morning from 6 am to 9.30 am and evening from 5 pm to 6 pm. The birds are classified on the basis of identifying characters described in the form of keys (Ali, 2002).

Results and Discussion

During the study, the monthly variation in the avifauna in the study area was recorded (Table-1).

Indian peafowl (*Pavo cristatus*) was occasionally noticed (Figs 1 and 2) in the nearby forest. The different species of kingfishers recorded in the study area include, Indian pied kingfisher (*Ceryle rudis leucomelanura*) (Fig 3), Indian small blue kingfisher (*Alcedo atthis bengalensis*) (Fig 4), brown-headed storkbilled kingfisher (*Pelargopsis amauroptera*) (Fig 5), black-capped kingfisher (*Hylcyon pileata*) (Fig 6). Small green bee-eaters (*Merops orientalis*) (Fig 7), recorded in the study area from the month of December to July, were the resident species.

Asian koel (*Eudynamys scolopacea*) (Fig 8), and rose ringed parakeet (*Psittacula krameri minillensis*) (Fig 9) were resident birds,