



Original Research Article**DOI - 10.26479/2018.0402.33****DIVERSITY AND CONSERVATION OF AVIFAUNA IN RAJULA CHERUVU WETLAND, NARASANNAPETA, NARASANNAPETA MANDAL, SRIKAKULAM DISTRICT, ANDRAPRADESH, INDIA**

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ABSTRACT: Study of Diversity and Conservation of Avifauna in RajulaCheruvu Wetland was conducted during December 2013 to April 2014, Species diversity and dominance of birds were calculated. 32 species of Birds belongs to 21 families were recorded, out of these 78 species 47 wetland and 31 terrestrial bird species. Birds abundance and vegetation cover were recorded. The highest number of birds was recorded in the month of December and lowest birds were recorded in April. Three near threatened species, namely Threatened spot billed pelican (*Pelicanus philippensis*) and Darter (*Anhinga rufa*) and Painted Stork (*Mycteria leucocephala*) were recorded. In most of the wetlands *Ipomea carnea* was the dominant species. It is good habitat for number of wetland birds so conservation measures will be required.

KEYWORDS: Rajulacheruvu, Wetland, Threatened species, Narasannapeta, Avifauna.

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1. INTRODUCTION

Diversity of avifauna is one of the most important ecological indicators to evaluate the quality of habitats [1]. Now-a-days, avifaunal diversity has been decreasing due to the destruction of natural habitats and human disturbances. Random destruction of natural habitats by cutting nesting trees and foraging plants for commercial use of woods and lands are the main factor responsible for narrow down in avian foraging habitat and their nesting sites [4, 5]. Thus, many species of birds

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may be forced to inhabit in the urban areas and constrain them to breed there. Internationally accepted term of wetlands describes them as “Area of Marsh, Fen, Peat land or water whether natural or artificial, permanent or temporary with water, that is static or flowing, fresh, brackish or salt including areas of marine water, the depth of which does not exceed 6 meters” [9]. Although bird surveys are being conducted in some wetlands as a part of the Asian waterfowl count [10], anthropogenic habitat loss is usually cited as the most important cause of recent species’ extinctions[13, 14]. We ask whether species losses are in fact more closely related to habitat loss than to any other aspect of human activity such as use of agricultural pesticides, or human population density and hence this study was taken up to assess the status of the wetlands and wetland birds in four districts. [23, 24]

2. MATERIALS AND METHODS

Rajulacheruvu (Fig: 1) is Located in Narasannapeta, Narasannapeta mandal of Srikakulam division on $18^{\circ} 24' 48.63''$ N latitude and $84^{\circ} 02' 30.61''$ E longitudes.

Fig: 1) Study Area

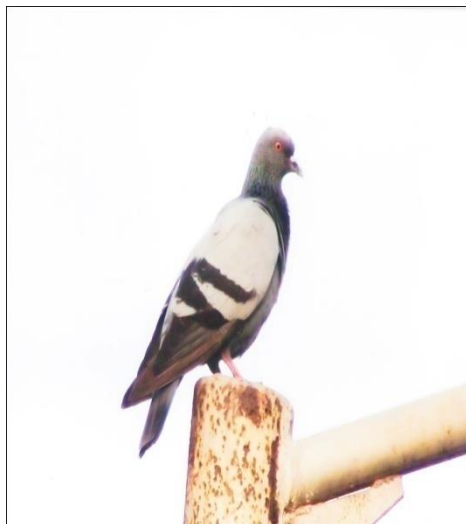


It is a natural, an urban wetland in the Narasannapeta town. It is a degraded natural wetland. It is a dumping place for solid wastes and effluents from the town. People report that till two years ago there was fishing in the wetland. Water is not used for irrigation. Bird survey was conducted, when birds are most active during day from 07:00 to 11:00 hrs and from 16:00 to 19:00 hrs. Field visits have been conducted weekly thrice in all three seasons and habitat wise. Opportunistic observations were made during other timings and species recorded during these observations included in the checklist. The birdlife in the study area were documented by direct observations, random walks and opportunistic encounters following [8]. Identification manuals and field guides [2, 18, 15] were used during survey. Common and scientific names of the birds following [15, 20] were adopted. The birds were categorized as Resident (R), Migratory (M), Aquatic (A) and Terrestrial (T). All the birds species recorded during the present study were tabulated giving their scientific name, family, IUCN status & legal status if any. Abundance of the recorded species is documented based on the total sightings during the study period as common uncommon and rare.

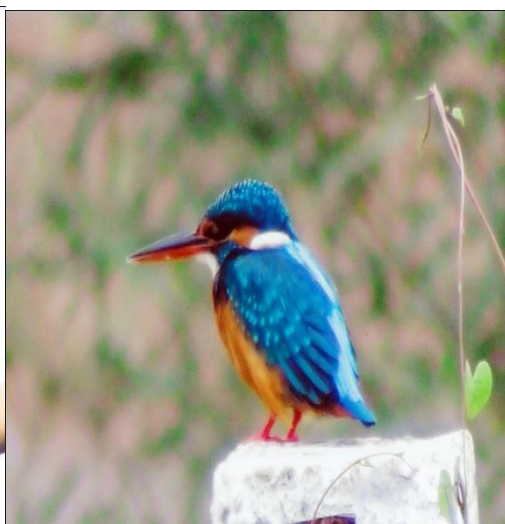
3. RESULTS AND DISCUSSION

The time of study 32 species birds [21, 22] namely Black winged stilt, Red Wattleed lapwing, painted snipe, Small blue kingfisher, Blue rock pigeon (Image: a, b) etc belong to 21 families were recorded (Table.1).

Images: a) Blue Rock Pigeon



b) Small Blue Kingfisher



In abundance wise out of the 32 species, 25 species were common, 6 species were uncommon and 1 species was seen in flocks. Status wise 26 species were Resident, 3 species were winter migrants and 3 species were local migrants. As habitat wise 14 species were wetland, 3 species were wetland dependant and 15 species were terrestrial birds. Maximum numbers of species were recorded in December. Family Ardeidae contributed with maximum species 5, followed by accipitridae with 3, columbidae with 2, cuculidae with 2, corvidae with 2, plocidae with 2 species and etc. The list of birds observed in the study area is executed in table 1. During the study period three globally near threatened species were recorded [6, 7]; namely Spot-billed Pelican

Pelicanus philippensis, Darter *Anhinga rufa* [12] and Painted Stork *Mycteria leucocephala* [3]. Vegetation cover was recorded in the study area. In most of the wetlands *Ipomea carnea* was the dominant species. *Acacia nilotica* was observed in all the wetland corners and the surroundings. 318 species of birds were recorded in Indian wetlands [11, 18]. Out of which 193 species are fully dependent on wetlands. In my study 14 birds species were recorded as wetland birds, 3 species were completely dependent on wetlands. Large water birds that are known to breed in Indian heronries, namely Spot-billed Pelican *Pelicanus philippensis*, Little Cormorant, *Phalacrocorax niger*, Large Egret, *Egretta alba* [15], Indian Pond-Heron, *Ardeola grayii*, Painted Stork, *Mycteria leucocephala*, Asian Openbill-Stork *Anastomus oscitans*. During survey 4 species recorded were breeding in different parts of the wetland. Towards the end of winter, February-March, most of the migratory birds started moving and also the water level started decreasing in the wetlands, which are possible reasons for the less

sighting frequency. The *Tringahypoleucos* and *Tringaglareola* were recorded in this area. Any areas that possess 1% of its world population in a regular manner can be declared as an Important Bird area. It was found that rice fields and other agricultural habitats were used more by Large Egrets [19] than other habitats. During the study period three globally near threatened species are recorded [16, 17]; namely Spot-billed Pelican, *Pelicanus philippensis*, Darter, *Anhinga rufa* and Painted Stork. When wetlands are covered with weeds such as *Ipomea* and *Eichhornia*, these species and many others are unable to use the site. This population is important and the areas must be protected and monitored. Rajulacheruvu wetland area is an important for the breeding and roosting birds and several other taxa of fauna [16]. It is a very good habitat including the roosting and nesting grounds for many wetland wading birds including globally near threatened bird - *Anhinga melanogaster*. Successful conservation of the species will depend on an improved understanding of its ecological requirements and moving patterns.

4. CONCLUSION

In the present investigation, it was concluded that the Rajula cheruvu wetland is a healthy water body providing a habitat for avian diverse. However, there is constant threat to avian fauna due to poaching, habitat loss and encroachments. The threatening activities should be banned to conserve the roosting habitats of migratory and threatened species along with other local avian fauna prevent depletion and further studies should be conducted to generate more details. In the light of present study, it is time to make proper measures to take necessary steps to implement so that the future generation can get the knowledge and role in the ecosystem and educate the people surrounded by the wetland is foremost thing in the process of conservation.

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SUPPLEMENTARY FILES

Table: 1) Check list of Birds Recorded From Study Area

Common Name	Scientific Name	Abundance	Habitat	Status
Little Grebe	<i>Tachybaptusruficollis</i>	C	W F	R
Spot-billed Pelican	<i>Pelecanusphilippensis</i>	C	W F	WM B
Little Cormorant	<i>Phalacrocoraxniger</i>	C	W F	R /LM B
Darter	<i>Anhinga melanogaster</i>	C	W	R/LM B
Large Egret	<i>Casmerodiusalbus</i>	UC	W	R/LM
Indian Pond-Heron	<i>Ardeolagravii</i>	C	W F	R
Purple Heron	<i>Ardeapurpurea</i>	C	W	R/LM
Painted Stork	<i>Mycteria leucocephala</i>	C	W F	LM B
Asian Openbill-Stork	<i>Anastomusoscitans</i>	C	W	LM/WM
Cotton Teal	<i>Nettapuscoromandelianus</i>	C	W	R/LM
Mallard	<i>Anas platyrhynchos</i>	UC	W F	WM
Black Kite	<i>Milvus migrans</i>	C	T	R
Blackwinged Kite	<i>Elanuscaeryuleus</i>	C	T	R
Pale Harrier	<i>Circus macrourus</i>	UC	T	WV
Purple Moorhen	<i>Pulphyrrio porphyria</i>	C	W	R/LM
Black-Winged Stilt	<i>Himantopus himantopus</i>	C	W F	R/LM
Red-Wattled Lapwing	<i>Vanellus indicus</i>	C	WD	R
Painted snipe	<i>Rostratula benghalensis</i>	UC	W F	R/L
Blue Rock Pigeon	<i>Columba livia</i>	C	T F	R
Ring dove	<i>Streptopelia decaocto</i>	UC	T	LM/WV
Rose-ringed Parakeet	<i>Psittacula krameri</i>	C	T F	R/LM
Asian Koel	<i>Eudynamis scolopacea</i>	C	T	R/LM
Barn Owl	<i>Tyto alba</i>	C	T	R/LM
Small Blue Kingfisher	<i>Alcedo atthis</i>	C	WD	R/LM
Small Bee-eater	<i>Merops orientalis</i>	C	WD	R
Indian Roller	<i>Coracias benghalensis</i>	C	T	R
Black Headed Myna	<i>Sturnus pagoderm</i>	UC	T SP	R
House Crow	<i>Corvus splendens</i>	C	T F	R
Jungle Crow	<i>Corvus macrorhynchos</i>	C	T F	R
Spotted Munia	<i>Lonchura punctulata</i>	CF	T F	R
House Sparrow	<i>Passer domesticus</i>	C	T F	R
Black Drongo	<i>Dicrurus macrocercus</i>	C	WD F	R