

OCCURRENCE AND THREATEN BIRD SPECIES IN WETLAND AREA, MA-U-BIN TOWNSHIP

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Abstract

Maubin Township has many wetland areas with water bodies and ponds. Wetland area provides habitat, food, and nest for bird species. Ma-u-bin Township is located in Ayeyawady Region. In the study period, 74 bird species (27 waterbirds and 47 terrestrial bird species) were recorded. Order Passeriformes represented by 32 species as the highest species number. Order Apodiformes and Piciformes represented by one species were recorded as lowest species number in the study period. A total of six species were recorded as globally threatened. *Mycteria leucocephala* (Painted Stork), *Anhinga melanogaster* (Oriental Darter), *Threskiornis melanocephalus* (Black-headed ibis) and *Poleocystes xanthus* (Asian Golden Weaver) as near threatened and *Grus Antigone* (Sarus Crane) and *Tringalareola* (Wood Sandpiper) as vulnerable were observed. The remaining bird species were recorded as least concern.

Key words: wetland areas, occurrence and threaten bird species,

Introduction

Wetlands are defined as lands transitional between terrestrial and aquatic ecosystems where the water table is usually at or near the surface or the land is covered by shallow water (Mitsch and Gosselink, 1986). Wetlands are among the most productive ecosystems in the world and play vital role in flood control, aquifer recharge, nutrient absorption and erosion control. In addition, wetlands provide home for a huge diversity of wildlife such as birds, mammals, fishes, frogs, insects and plants (Buckton, 2007). The birds are very sensitive to such activities and responds by changes in species composition and density. Wetland avifauna acts as indicators of wetland quality and regional biodiversity (Kumar and Gupta, 2009). In this area, various wetland types, is suitable habitat for bird species. Therefore, Maubin Township was chosen to study for this work.

Objectives

Objective of present study is to investigate the occurrence of bird species, to examine the species composition of the recorded birds, to record the threaten bird species in the study area.

Materials and Methods

The study area located 16° 39' N and 95° 34' E in Ma-u-bin Township, within the Ayeyawady Region. This study area has paddy fields and natural wetland area. The study period was from July 2017 to March 2018. Data collection was used by line (boat) transects and point count method was used to count the bird species. Data collection was conducted by boat in the study area for one time per monthly. Bird observation was made from 6:00 to 10:00 am and from 13:00 to 18:00 pm. Identification of bird species used the

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field guides by Smythies (2001) and Robson (2015). The status of bird species were categorized as Bibby *et al.*, (2000).



Fig. 1 Location map of Maubin environs (Source: Google earth, 2016)

Results and Discussion

During the study period, 74 species (27 waterbird and 47 terrestrial bird species) were recorded in the study areas. Out of the 27 waterbird species, belonging to 23 genera, 12 families and six orders were recorded (Table 1). Recorded of 47 terrestrial bird species, belonging to 37 genera, 22 families, and seven orders were recorded. (Table 2).

Among the recorded waterbird species, the highest species number in order Pelecaniformes (48%) and the lowest species number in order Ciconiiformes and Suliformes (7% each) were observed in the study areas (Fig. 1). In recorded terrestrial bird species, the highest species number in order Passeriformes (68%) and the lowest species number in order Apodiformes and Piciformes (2% each) were observed (Fig. 2). During the study period, five species as very common, six species as common and 16 species as uncommon were recorded in waterbird species. Moreover in terrestrial bird species, two species as very common, 27 species common and 18 species as uncommon were recorded. In the study area six species were recorded as threatened species. According to IUCN Red List (2015), Painted Stork (*Mycteria leucocephala*), Oriental Darter (*Anhinga melanogaster*), Black-headed Ibis (*Threskiornis melanocephalus*), and Asian Golden Weaver (*Ploceus hypoxanthus*) as Near-threatened, Sarus Crane (*Grus Artigone*) and *Tringah lureola* (Wood Sandpiper) as Vulnerable level were recorded (Plate 1).

Result show, 27 waterbird species and 47 terrestrial bird species were found in this area. In the study area has different wetland habitats. Water birds and terrestrial bird species were found to utilize different wetland habitats for foraging, nesting and roosting on the emergent and fringed vegetation. Although the recorded some terrestrial birds are wetland associated birds. Therefore recorded bird species are good indicators for aquatic habitats. This may be due to the suitable habitat for bird species. The highest waterbird species number in order Pelecaniformes (48%) and the highest terrestrial bird species number in order Passeriformes (68%) were observed in the study area. It may be due to the different habitat used and more abundance of availability food sources. In the present study, six species were recorded as threatened species in the study area. The highest threaten level of bird species was recorded in the study area. It may be due to the food provide and suitable habitat for them. Many activities as cutting of trees, draining of water, throwing of domestic garbage, catching the fish, extending the lands and construction of roads are some major threats to the bird diversities of aquatic habitats. Bird species require a cluster of tree within their habitats for roosting, foraging and perching.

Table 4.1. Occurrence and relative abundance of recorded waterbird species in the study area

No	Order	Family	No.	Scientific Name	Common Name	Occurrence	
						Status	RA
1	Anseriformes	Anatidae	1	<i>Dendrocygnajavanica</i>	Lesser Whistling-Duck	LC	Uc
			2	<i>Nettapuscoromandelianus</i>	Cotton Pygmy-Goose	LC	Uc
2	Ciconiiformes	Ciconiidae	3	<i>Anastomusoscitans</i>	Asian Openbill	LC	Vc
3	Suliformes	Phalacrocoracidae Anhingidae	4	<i>Mycteria leucocephala</i>	Painted Stork	NT	Uc
			5	<i>Phalacrocoraxniger</i>	Little Cormorant	LC	C
4	Pelecaniformes	Areidea	6	<i>Anhinga melanogaster</i>	Oriental Darter	NT	Uc
			7	<i>Ixobrychuscinnamomeus</i>	Cinnamon Bittern	LC	Uc
			8	<i>I. flavicollis</i> *	Black Bittern	LC	Uc
			9	<i>Ardeacinerea</i> *	Grey Heron	LC	Uc
			10	<i>A. Purpurea</i> *	Purple Heron	LC	Uc
			11	<i>A. alba</i> *	Great Egret	LC	Vc
			12	<i>Mesophoyxintermedia</i> *	Intermediate Egret	LC	Vc
			13	<i>Egretta garzetta</i> *	Little Egret	LC	C
			14	<i>Bubulcus coromandus</i> *	Eastern Cattle Egret	LC	C
			15	<i>Ardeola grayii</i> *	Indian Pond-Heron	LC	C
			16	<i>A. bacchus</i> *	Chinese Pond-Heron	LC	C
			17	<i>Nycticorax nycticorax</i> *	Black-crowned Night-Heron	LC	C
		Threskiornithidae	18	<i>Plegadis falcinellus</i> *	Glossy Ibis	LC	Vc
			19	<i>Threskiornis melanocephalus</i> *	Black-headed Ibis	NT	Vc
5	Gruiformes	Rallidae	20	<i>Amaurornis phoenicurus</i> *	White-breasted Waterhen	LC	Uc
			21	<i>Gallicrex cinerea</i> *	Watercock	LC	Uc
			22	<i>Grus Artigone</i> *	Sarus Crane	VU	Uc
6	Charadriiformes	Gruidae	23	<i>Himantopus himantopus</i> *	Black-winged Stilt	LC	Uc
		Recurvirostridae	24	<i>Tringalareola</i> *	Wood sandpiper	VU	Uc
		Scolopacidae	25	<i>Hydrophasianus chirurgus</i> *	Pheasant-tailed Jacana	LC	Uc
		Jacanidae	26	<i>Metopidius indicus</i> *	Bronze-winged Jacana	LC	Uc
		Laridae	27	<i>Sternula albifrons</i> *	Little Tern	LC	Uc

LC = Least concern Uc = Uncommon C = Common Vc = Very common RA = Relative abundance

Table 4.2. Occurrence and relative abundance of recorded terrestrialbird species in the study area

No	Order	Family	No	Scientific Name	Common Name	Occurrence	
						Status	RA
1	Accipitriformes	Accipitridae	1	<i>Elanuscaeruleus</i>	Black-Shoulder Kite	LC	Uc
			2	<i>Milvuslineatus</i>	Black-ear Kite	LC	Uc
			3	<i>Accipiter badius</i>	Shikra	LC	Uc
2	Columbiformes	Columbidae	4	<i>Streptopeliatranquebarica</i>	Red Collared-Dove	LC	Uc
			5	<i>S. chinensis</i>	Spotted Dove	LC	C
			6	<i>Clamatorjacobinus</i>	Pied Cuckoo	LC	Uc
	Cuculiformes	Cuculidae	7	<i>Eudynamysscolopaceus</i>	Asian Koel	LC	Uc
			8	<i>Centropusbengalensis</i>	Lesser Coucal	LC	Uc
			9	<i>Cypsiurusbalasiensis</i>	Asian Palm-Swift	LC	Vc
3	Apodiformes	Apodidae	10	<i>Alcedoalthis</i>	Common Kingfisher	LC	Uc
4	Coraciiformes	Alcedinidae	11	<i>Halcyon smyrnensis</i>	White-throated Kingfisher	LC	Uc
			12	<i>Meropsorientalis</i>	Green Bee-eater	LC	C
			13	<i>M. leschenaulti</i>	Chestnut-headed Bee-eater	LC	C
		Coraciidae	14	<i>Coraciasbenghalensis</i>	Indian Roller	LC	Uc
			15	<i>Megalaimahaemacephala</i>	Coppersmith Barbet	LC	Uc
			16	<i>Aegithinatiphia</i>	Common Iora	LC	C
6	Passeriformes	Aegithinidae	17	<i>Laniuscristatus</i>	Brown shrike	LC	Uc
			18	<i>L.collurioides</i>	Burmese Shrike	LC	Uc
			19	<i>Orioluschinensis</i>	Black-naped Oriole	LC	Uc
		Dicruridae	20	<i>Dicrurusmacrocerus</i>	Black Drongo	LC	C
			21	<i>D. leucophaeus</i>	Ashy Drongo	LC	C
			22	<i>Rhipiduraalbicollis</i>	White-throated Fantail	LC	Uc
		Corvidae	23	<i>Dendrocittvagabunda</i>	RufousTreepile	LC	Uc
			24	<i>Corvussplendens</i>	House crow	LC	C
			25	<i>Hirundorustica</i>	Barn Swallow	Lc	Vc
		Hirundinidae	26	<i>Ripariariparia</i>	Common Sand-Martin	LC	C
			27	<i>Cecropisdaurica</i>	Red-Rumbed Swallow	LC	C
			28	<i>Pycnonotussinensis</i>	Red-vented Bulbul	LC	C
			29	<i>P. jocosus</i>	Red-whiskered Bulbul	LC	C
			30	<i>P. blanfordi</i>	Streak-eared Bulbul	LC	C

Table 4.2. Continued

No	Order	Family	No	Scientific Name	Common Name	Occurrence	
						Status	RA
		Cisticolidae	31	<i>Cisticola juncidis</i>	Zitting Cisticola	LC	C
			32	<i>Orthotomus sutorius</i>	Common Tailorbird	LC	C
			33	<i>Prinia inornata</i>	Plain Prinia	LC	C
		Muscicapidae	34	<i>Copsychus saularis</i>	Oriental Magpie Robin	LC	C
			35	<i>Ficedula albicilla</i>	Taiga Flycatcher	LC	C
			36	<i>Saxicola auratus</i>	Eastern stonechat	LC	C
		Sturnidae	37	<i>Acridotheres fuscus</i>	Jungle Myna	LC	C
			38	<i>A. tristis</i>	Common Myna	LC	C
		Dicaeidae	39	<i>Dicaeum cruentatum</i>	Scarlet-backed Flowerpecker	LC	C
		Nectariniidae	40	<i>Leptocomazylonia</i>	Purple-rumped Sunbird	LC	Uc
			41	<i>Cinnyris asiaticus</i>	Purple sunbird	LC	C
			42	<i>C. Jugularis</i>	Olive-backed Sunbird	LC	Uc
		Passeridae	43	<i>Passer domesticus</i>	House Sparrow	LC	C
			44	<i>P. montanus</i>	Eurasian Tree sparrow	LC	C
		Ploceidae	45	<i>Ploceus philippinus</i>	Baya Weaver	LC	C
			46	<i>P. hypoxanthus</i>	Asian Golden Weaver	NT	C
		Estrildidae	47	<i>Lonchura punctulata</i>	Scaly-breasted Munia	LC	C

LC = Least concern Uc = Uncommon C = Common Vc = Very common RA = Relative abundance

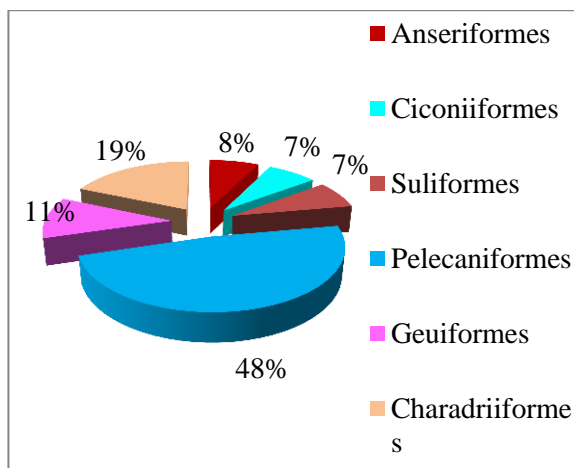


Fig.1 The composition of waterbird species in the study area

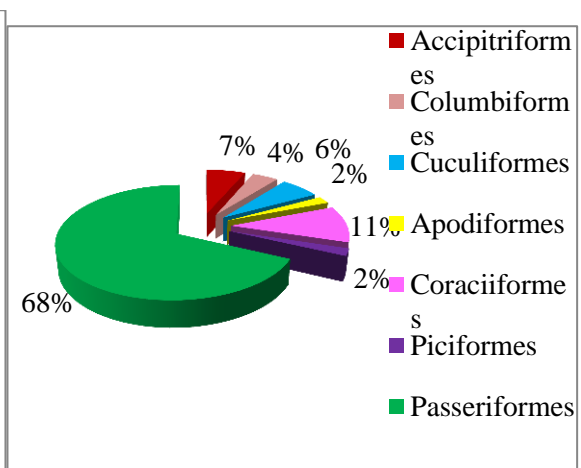


Fig. 2 The composition of terrestrial bird species in the study area



A. Mycteria leucocephala



B. Anhinga melanogaster



C. Threskiornis melanocephalis



D. Grus antigone



E. Tringaglareola



F. Ploceus hypoxanthus

Plate 1. Recorded threatened bird species in the study area

Conclusion

The wetland area of Ma-u-bin environs provides the rich of bird species. Most of bird species were found near the wetland environs. Recorded bird species used these wetland habitats for roosting, foraging and perching. Moreover, threaten bird species were also found in this wetland area. Hence, the habitatsof wetland with thick cover ofvegetationshould be maintained in the wetland areas.

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