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# Occurrence and Species Composition of Bird Fauna in Minbu Township, Magway Region

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**Abstract:- A total of 60 bird species belong to 47 genera, distributed among 34 families and 12 orders were recorded from five sampling site of Minbu environs during the study period from September 2011 to April 2012. Thirty species belonged to order Passeriformes. Out of the total number of species, 10 species were waterbirds comprising under 10 genera, 7 families and 5 orders, and 50 species were terrestrial birds belonging to 37 genera, 26 families and nine orders. Among the bird species recorded, 30 species were passerine birds, thus the predominant order of birds in the study area. Among the allocated five study sites, site IV revealed to be rich in species composition, amounting to 53 species in all. During the study, two endemic species, *Turdoides gularis* (White-throated Babbler) and *Mirafra microptera* (Burmese Bushlark) were recorded. *Ciconia episcopus* (Woolly-necked stork) *Threskiornis melanocephalus,* (Black-headed Ibis), *Pericrocotus igneus* (Fiery Minivet) and *Dicrurus leucophaeus* (Ashy Drongo) were catorized near threatened species.**

***Keywords***:- *Endemic Species, Threatened Species, Treron phoenicoptera, Pericrocotus igneus, Lonchura malacca*

## I. INTRODUCTION

Base line information of avifauna in an area is the status of birds and the habitat quality with special reference to the indicator species including the rare and endemic species of the region. The community studies have been largely expressed in terms of species richness, abundance, density and diversity. All these components have been referred to an indicator of habitat quality, because an increase in the value of the components is generally though to reflect larger amount of the necessary resources to sustain a large population with a given area [1].

In South-east Asia, including Myanmar, Thailand, Peninsular Malaysia, Singapore, Vietnam, Laos and Cambodia, a total of 1,327 species are known to occur [2]. However, the forest Department reported the bird species to be of 1200 species in Myanmar [3]. Myanmar ranked the 13$^{th}$ in the world regarding with the species richness of birds.

Myanmar's avifauna consists of six endemics: Hooded Treepie (Crypsirina cucullata), White-browed Nuthatch (Sitta victoriae), White-throated Babbler (Turdoides gularis), Burmese Bushlark (Mirafra microptera), Burmese Tit (Aegithalos sharpie) and Jerdon's Minivet (Pericrocotus albiforns) [4].

Minbu Township is situated in Central Dry Zone of Myanmar which has dry and hot climate. This area is included in one of important Bird Areas (IBA) of Myanmar in Ayeyawaddy River Sinbyugyun-Minbu Section. However it lies on the western bank of the Ayeyawady River. Minbu Township environs is surrounded by wetland area, crop plants, some hill regions and human habitations, Minbu offers as a host for inhabitation of different species including birds.

The present work is conducted with the objectives:

- To investigate the composition of bird species in Minbu environs
- To determine the dominant groups of birds among different families and orders
- To determine the distribution of bird species in different sampling sites of the study area.

## II. MATERIALS AND METHODS

Minbu Township is situated in Minbu District within the Dry Zone of Central Myanmar, which has dry and hot climate. The district has an area of 3596.24 square mile (2301599 acres). Minbu Township lies on the Western bank of the Ayeyawady River. It lies between 20º 09' 48.2" to 20° 11' 53.9 N and 94° 52' 36.3" to 94° 53' 2.5" E. It is surrounded by wetland areas, crop plant some hilly regions and human habitations. The study sites are - Site (I) Phalanyon Village, Site (II) Kyipinkan Village, Site(III)Taungman Village Site (IV) Theingone Village, Site (V) Outkyaung Village. Data collections of field trips were conducted from September 2011 to April 2012. The bird species were identified referring to the taxonomic descriptions [5, 6, 7 and 8]. Study site was visited once a month. The collection of data was made using point count method [9]. At every point observation was made by standing and recording all the birds seen or heard at a fixed distance (25m radius) for 10 minutes. To minimize disturbance 3 to 5 min time lapse was taken prior to observing. The minimum distance between two points was 200m. All counts were conducted during the first 3 hours after sunrise. Status of the bird has been worked out and different status categories like resident, winter visitor, passage migrant, non-breeding visitor and breeding visitor

have been assigned strictly with reference to the study area on the basis of presence or absence method [10].

## III. RESULTS

A total of 60 bird species distributed under 47 genera, 33 families and 12 orders were identified and recorded during the study period which commenced from September 2011 till April 2012 and embodied five study sites of different nature and vegetation (Table 1 and 2). The highest composition of species were recorded in order Passeriformes (50.00%), followed by Caraciiformes (13.33%), Ciconiiformes (8.33%), Falconiformes, Columbiformes and Strigiformes (each with 5.00%), Anseriformes and Cuculiformes (each with 3.33%) and the remaining four orders Gruiformes, Charadriiformes, Psittaciformes, and Piciformes (each with 1.67%).

During the study, representatives of the order Passeriformes constitute the highest number of species (30) confined to (21) genera and distributed among 15 families, while the remaining 10 orders were represented by 1 to 8 species only.

With respect to the number of species encountered at each study site, the largest number of species (53) was encountered in Site IV, followed by those of Site I (47 species), Site II (38 species), Site V (33 species) and only (27 species) from Site III. However, 21 species were common to all the study sites. On the other hand, three species namely *Treron phonicoptera*, *Lonchura malacca* and *Pericrocotus igneus* were encountered only in Site IV.

In the present study, two endemic species, *Turdoides gularis* (White-throated Babbler) and *Mirafra microptera* (Burmese Bushlark) were recorded. *Ciconia episcopus* (Woolly-necked stork) *Threskiornis melanocephalus*, (Black-headed Ibis), *Pericrocotus igneus* (Fiery Minivet) and *Dicrurus leucophaeus* (Ashy Drongo) were catorized near threatened species.

| No | Family | Scienticific Name | Status |
|---|---|---|---|
| 1 | Anatidae | *Tadorna ferruginea* | WM |
| 2 | | *Dendrocygna javanica* | R |
| 3 | Ciconiidae | *Ciconia episcopus* | R |
| 4 | Threskiornithidae | *Threskiornis melanocephalus* | WM |
| 5 | Ardeidae | *Egretta garzetta* | R |
| 6 | | *Bubulcus ibis* | R |
| 7 | | *Ardeola bacchus* | R |
| 8 | Falconidae | *Falco naumanni* | WM |
| 9 | | *F. brabarus* | WM |
| 10 | Accipitridae | *Elanus caeruleus* | R |
| 11 | Rallidae | *Amaurornis phoenicurus* | R |
| 12 | Vanellidae | *Vanellus indicus* | R |
| 13 | Columbidae | *Columba livia* | R |
| 14 | | *Treron phoenicoptera* | R |
| 15 | | *Streptopelia chinensis* | R |
| 16 | Psittacidae | *Psittacula eupatria* | R |
| 17 | Cuculidae | *Cacomantis merulinus* | R |
| 18 | | *Eudynamys scolopacea* | R |
| 19 | Strigidae | *Athene brama* | R |
| 20 | | *Ninox scutulata* | R |
| 21 | | *Tyto alba* | R |
| 22 | Coraciidae | *Coracius benghalensis* | R |
| 23 | Halcyonidae | *Halcyon smyrnensis* | R |
| 24 | Alcedinidae | *Alcedo atthis* | R |
| 25 | Cerylidae | *Ceryle rudis* | R |
| 26 | Meropidae | *Merops orientalis* | R |
| 27 | | *M. viridis* | R |
| 28 | | *M. philippinus* | R |
| 29 | Upupidae | *Upupa epops* | R |
| 30 | Megalaimidae | *Megalaima haemacephala* | R |
| 31 | Campephagidae | *Pericrocotus igneus* | R |
| 32 | Oriolidae | *Oriolus tenuirostris* | R |
| 33 | Dicruridae | *Dicrurus macrocercus* | R |
| 34 | | *D. leucophaeus* | R |
| 35 | | *D. aeneus* | R |

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| | | | |
|---|---|---|---|
| 36 | Corvidae | *Corvus splendens* | R |
| 37 | | *C. macrorhynchos* | R |
| 38 | | *Artamus fuscus* | R |
| 39 | Laniidae | *Lanius collurioides* | R |
| 40 | | *L. schach* | R |
| 41 | Nectariniidae | *Nectarinia asiatica* | R |
| 42 | Motacillidae | *Motacilla alba* | R |
| 43 | Passeridae | *Passer domesticus* | R |
| 44 | | *P. flaveolus* | R |
| 45 | | *Lonchura punctulata* | R |
| 46 | | *L. Malacca* | R |
| 47 | Sturnidae | *Sturnus burmannicus* | R |
| 48 | | *Acredotheres tristis* | R |
| 49 | | *A. fuscus* | R |
| 50 | | *A. grandis* | R |
| 51 | Muscicapidae | *Saxicola torquata* | R |
| 52 | | *S. caprata* | R |
| 53 | | *Copsychus saularis* | R |
| 54 | Alaudidae | *Mirafra microptera* | R |
| 55 | | *Alauda gulgula* | R |
| 56 | Pycnonotidae | *Pycnonotus cafer* | R |
| 57 | | *P. blanfordi* | R |
| 58 | Hirun dinidae | *Hirundo rustica* | R |
| 59 | Timaliidae | *Turdoide gularis* | R |
| 60 | Cisticolidae | *Orthotomus sutorius* | R |

Table 1:- List of Birds Recorded in the Study Area

R = Resident
WM = Winter Migrant

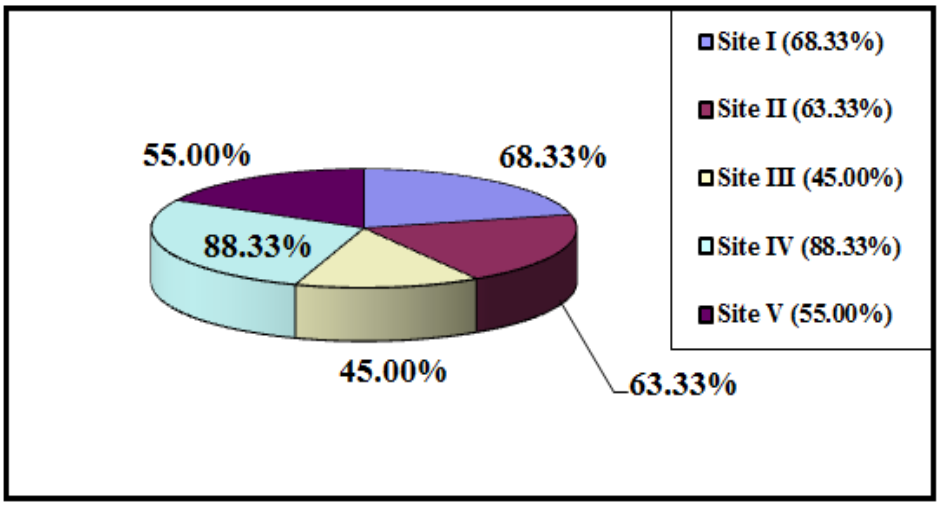


Fig 1:- The Percentage Species Composition in Different Study Sites

## IV. DISCUSSION

Throughout this survey 60 species of avianfauna belonging to 47 genera, 22 families under 12 orders were recorded from September 2011 to April 2012. Out of total species, 10 species were water birds comprising 10 genera 7 families and 5 orders. On the other hand, 50 species of terrestrial birds belonging to 37 genera, 26 families and 9 orders were also recorded.

Among the terrestrial bird species, Passeriformes is largest order with highest number of bird species and family including 30 species and 15 families. Family Stunidae and Passeridae showed the highest composition of bird species. Campephagidae, Nectariniidae, Hirundinidae, Cisticolidae and Timaliidae revealed the lowest in number.

In accordance with study sites, the highest number of species were found in study Site IV (Theingone village) because this site is abundant with medium and tall tress, bushes, grassland and paddy field, and is located near Eyee Ma Dam. This study site provides food and shelter for birds so occupied by large number of bird species. The abundance of the tropical bird communities is related to food availability and seasonal changes [11].

The second highest number of bird species were found in Phalanyon village (Site I) because it was composed of forest area, some hills, sesame field and situated near Ayeyawady River.

Another good habitat for bird is Kyipinkan village (Site II) because this study site is the kind of mixed habitat type with medium and tall trees, Aung Pin Lae Lake and artificial fishery ponds. It revealed to be a good habitat for water birds. All water birds were found in this study site.

Outkaung village of study Site V is good habitat for birds in which various sizes of bushes, shrubs and croplands are located.

The lowest numbers of bird species were recorded in Taungman village. This study site composed of lower number of trees, and crop plants than other study sites. So, birds can't easily get food and shelter in consequence with occurrence of lowest number of species.

Among the recorded 60 species of birds in this study, 42 species are residents and seven species are residents, so also the number of winter visitors. *Tadorna ferruginera* (Ruddy Sheluduck), *Ardeola bacchus* (Chinese Pond Heron), *Falco naumanni* (Lesser kestrcl), *Falco brabarus* (European Kestrel) are winter visitors and *Merop viridis* (Inidan Bee-eater), *Hlrundo rustica* (Barn Swallow) are also winter visitors and passage birds. *Merop philippinus* (Blue-tailed Bee-eater), *Motacilla alba* (White Wagtail) are Resident and passage birds. *Dandrocygna javanica* (Lesser Whistling duck) is a former resident, *Threskiornis melanocephalus* (Black-Headed-Ibis) is non breeding and winter visitor and *Bublucus ibis* is taken as former resident and winter visitor.

Myanmar's avifauna consists of six endemic species. In the present study two endemic species, White-throated Babbler *Turdoides gularis*, and Burmese Bushlark *Mirafra microptera* were recorded. In the study area, *Ciconia episopus* (Woolly-Necked Stork), *Threskiornis melanocephalus* (Black-headed Ibis), *Dicrurus leucophaeus* (Ashy Drongo) and *Pericrocotus igeus* (Fiery Minivet) are near threatened species [12].

The data recorded during this work the product of eight months study period, indicated there is still a need to characterize the avifauna of the study area. Extensive study of birds will lead to outling measures to protect these birds and their habitats and those species that are especially at rusks.

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