

Avifauna Diversity in and around Wadali Nursery, Wadali range, Dist. Amravati, Maharashtra

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Abstract

The present investigation has been focused on avian diversity and their relation with habitat in and around Wadali nursery, Wadali range, Amravati. The study area was distributed within four zones Nursery area, Wadali reservoir area, small lake area and Bamboo plantation area. Eighty seven (87) species of birds belonging to thirteen order and thirty seven families were recorded within in a very short time period i.e. 2-Nov-2013 to 23-Nov-2013. The highest abundance of avifauna was recorded at nursery area (42 species-mostly the passerines) because of selective plantation while the lowest abundance was recorded at only nursery fencing site of Wadali reservoir area which is mainly covered by Ipomoea (10 species-mainly the raptors). On small lake area (seasonal reservoir) Twenty one (21) species of birds which includes almost all migratory and waders were recorded and their number was also good because it was noted that reservoir area having various types of aquatic weeds and small invertebrates. Fourteen species birds were recorded at newly bamboo plantation area. Most of the varieties are dominated by two orders (O) and four families (F) i.e. O-Passeriformes (31) O-Ciconiiformes (20), and F- Anatidae(6), F- Ardeidae(6), F- Corvidae(7) F- Passeridae(6). It is concluded that 70 species has wide spread resident,3-wide spread winter visitor, 4-very local resident/wide spread winter visitor,5- wide spread resident/wide spread winter visitor, 2-wide spread-sparse migrant, 1- wide spread-winter visitor, 2-wide spread-sparse visitor. The area has selective plantation varieties and prohibited anthropogenic activities that help to isolate this area which will automatically increased the avifauna diversity in that region. The study highlights the richness of the Wadali nursery in respect of avifauna which is better indicators of healthy forest and aquatic ecosystems. It is not only gives an idea about the status of birds in such a small area but also indicates list of reasons about their surprising number. The continuous monitoring should be made to show the changing result in future.

KEYWORDS: Wadali nursery, Wadali reservoir, Avifauna diversity, Taxonomy, Habitat.

Introduction:

Two biomes are found in Maharashtra, the Indian Peninsula Tropical Moist Forest (Biome-10) in the Western Ghat region, and Indo-Malayan Tropical Dry Zone (Biome-11) in the remainder of the State. The sprawling Deccan Plateau, covering almost 80% of the state qualifies for Biome-11. The major habitat types in this biome are Tropical Dry Deciduous Forest, Tropical Thorn Forest, and Grassland. Nannaj plots, Ozar grassland, and Gangapur grassland fall under Tropical Thorn Forest and Grassland. Of course, the Indian subcontinent, a part of the vast Oriental biogeographic regions, is very rich in biodiversity. Approximately 9,000 birds were recorded in the world; the Indian

subcontinent having 1,300 species and 540 species of birds listed from Maharashtra. As per the available data, total 171 species were recorded in the Pohara and Malkhed reserve forest. Wadali nursery is a very smallest area of Wadali range which is the part of Pohara and Malkhed reserve forest at East-West corner of Amravati city, Maharashtra. It is located between $20^{\circ}55'31.25''$ and $77^{\circ}47'38.53''$. Approximately the total area is about 20hact that includes one small lake, fencing area of nursery around the reservoir, nursery and garden area. The aim is not only to study the diversity of avifauna but also observe the habitat condition. Further study will be concentrated on particular species in that region.

Materials and Methods:

The study area has been divided into four region based on the geographic continuity. These regions are nursery area, reservoir area, Small lake area, Bamboo plantation area. A daily visited hour was decided i.e. morning 6.00am to 10.00am, afternoon 1.00pm to 3.00pm and 4.00pm to 5.30pm. while searching first identify the bird with naked eye but if needed taking the help of binocular 10 x 50X (OLYMPUS) and immediately trying to take a photographed and then conform the bird through the books like Bikram Grewal, Bill Harvey and Otto Pfister. The results are prepared by the help of observation table, map and graphs.

Results:

The result shows that eighty seven (87) species of birds belonging to thirteen (13) order and thirty seven (37) families were indentified in and around Wadali nursery (Observation table -a). Broadly it can be categorized in to thirty three (33) species of waders and fifty four (54) species of passerines. The present study was concentrated in and around four zones where all the species recorded. The highest abundance of birds were recorded at Nursery area (42 species mainly the passerines) and the reason is selective plantation which are mainly dominated by bamboo and other verities like Indian coral tree, Indian laburnum, Neem tree, Jacaranda, Peacock flower, Portia tree, Black catechu, Flame of forest, Teak, Indian cork tree, lead tree, Eucalyptus, Peepal tree, Jambhul, Gum Arabic tree, Gliricidia sepium, Lactuca sativa, pongamia pinnata, Tekoma stans, Acacia nilotica, Acacia Senegal, Acacia arabic and Ficus racemosa while the lowest abundance was recorded at Wadali reservoir area (10 species usually raptors) because the lake is used for commercial purposes . Only the nursery site is covered by huge vegetation of Ipomoea where the birds are identified. On seasonal reservoir (small lake area) Twenty one (21) species of birds which includes almost all migratory like Ducks, Storks, Plovers, pipers, Kingfishers, stilts, Water hens, coot and shank were recorded and their number was also good because it was noted that reservoir area having the various types of aquatic weeds and small invertebrates. Fourteen species birds were recorded at Bamboo plantation area (Graph-b). Out of eighty seven, most of the varieties are dominated by two orders (O) and four families (F) i.e. O-Passeriformes (31) O-Ciconiiformes (20), and F- Anatidae(6), F- Ardeidae(6), F- Corvidae(7) F- Passeridae(6) and remaining orders are Galliformes-3Anseriformes-7Piciformes-2Bucerotiformes-1Upupiformes-1Coraciiformes-5Cuculiformes-4Psittaciformes-3Strigiformes-1Columbiformes-4Gruiformes-3 and families Phasianidae-3, Dendrocygndiae-4,

Picidae-1, Megalaimidae-1, Bucerotidae-1, Upupidae-1, Coraciidae-1, Alcedinidae-2, Cerylidae-1, Meropidae-1, Cuculidae-1, Centropodidae-1, Psittacidae-3, Strigidae-1, Columbidae-4, Rallidae-3, Scolopacidae-3, Charadriidae-3, Accipitridae-4, Podicipedidae-1, Phalacrocoracidae-3, Threskiornithidae-1, Ciconiidae-1, Laniidae-2, Muscicapidae-3, Sturnidae-3, Hirundinidae-1, Pycnonotidae-1, Cisticolidae-1, Sylviidae-1, Sturnidae-2, Alaudidae-2 and Nectariniidae-2 (graph -d). It is concluded that 70 species has wide spread resident, 3-wide spread winter visitor, 4-very local resident/wide spread winter visitor, 5- wide spread resident/wide spread winter visitor, 2-wide spread-sparse migrant, 1- wide spread-winter visitor, 2-wide spread-sparse visitor (Graph-c). The present investigation highlights the richness of the Wadali nursery in respect of avifauna which is better indicators of healthy forest and aquatic ecosystems.

Discussion:

The selected area has become very ideal in relation to plant varieties and also prohibited the interference of human activities, cattle grazing, fodder collection, fishing and poaching that helps to developed healthy ecosystems like forest and pond. It will automatically increase the avifauna diversity in that region. This study not only gives an idea about the status of birds in such a small area but also indicates list of reasons about their surprising number and continuous monitoring should be made to show the changing result in future.

Acknowledgement:

Author is very thankful to Mr. Pradeep K. lakade, RFO ,Wadali range, Amravati for making available all facilities during the study and their endless efforts will really helpful for the betterment of avifauna and ecosystems in the region.

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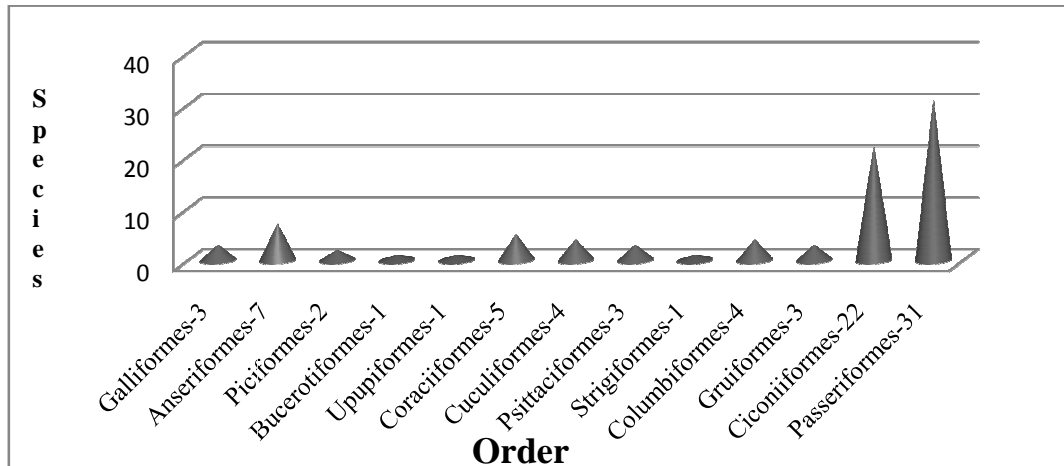
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| S.No | FAMILY | SCIENTIFIC NAME | COMMON NAME and OCCURANCE |
|------|-------------------------------|----------------------------------|-----------------------------|
| 1. | Phasianidae | <i>Francolinus pondicerianus</i> | Grey Francolin-R |
| 2. | Phasianidae | <i>Perdica asiatica</i> | Jungle Bush Quail-R |
| 3. | Phasianidae | <i>Pavo cristatus</i> | Indian peafowl-R |
| 4. | Dendrocygnidae | <i>Dendrocygna javanica</i> -M | Lesser Whistling Duck-R |
| 5. | Anatidae, Anatinae (Anserini) | <i>Tadorna ferruginea</i> -M | Ruddy Shelduck-rW |
| 6. | Anatidae, Anatinae (Anserini) | <i>Sarkidiornis melanotos</i> -M | Comb Duck-R |
| 7. | Anatidae, Anatinae (Anatini) | <i>Anas strepera</i> -M | Gadwell-W |
| 8. | Anatidae, Anatinae (Anatini) | <i>Anas platyrhynchos</i> -M | Mallard-rW |
| 9. | Anatidae, Anatinae (Anatini) | <i>Anas poecilorhynchos</i> -M | Spot Billed Duck-R |
| 10 | Anatidae, Anatinae (Anatini) | <i>Anas acuta</i> -M | Northern Pintail-W |
| 11 | Picidae | <i>Dinopium benghalense</i> | Black Rumped Flameback-R |
| 12 | Megalaimidae | <i>Megalaima haemacephala</i> | Coppersmith Barbet-R |
| 13 | Bucerotidae | <i>Ocyroceros birostris</i> | Indian Grey Hornbill-R |
| 14 | Upupidae | <i>Upupa epops</i> | Common Hoopoe-RW |
| 15 | Coraciidae | <i>Coracias benghalensis</i> | Indian Roller-R |
| 16 | Alcedinidae | <i>Alcedo atthis</i> | Common kingfisher-R |
| 17 | Alcedinidae | <i>Halcyon smyrnensis</i> | White Throated Kingfisher-R |
| 18 | Cerylidae | <i>Ceryle rudis</i> | Pied Kingfisher-R |
| 19 | Meropidae | <i>Merops orientalis</i> | Green Bee Eater-R |
| 20 | Cuculidae | <i>clinator jacobinus</i> | Pied Cuckoo-P |
| 21 | Cuculidae | <i>Hierococcyx varius</i> | Common Hawk Cuckoo-R |
| 22 | Cuculidae | <i>Eudynamis scolopacea</i> | Asian Koel-R |
| 23 | Centropodidae | <i>Centropus sinensis</i> | Greater Coucal-R |
| 24 | Psittacidae | <i>Psittacula eupatria</i> | Alexandrine Parakeet-R |
| 25 | Psittacidae | <i>psittacula krameri</i> | Rose Ringed Parakeet-R |
| 26 | Psittacidae | <i>psittacula cyanocephala</i> | Plum Headed Parakeet-R |
| 27 | Strigidae | <i>Athene brama</i> | Spotted Owlet-R |
| 28 | Columbidae | <i>Columba livia</i> | Rock Pigeon-R |
| 29 | Columbidae | <i>Streptopelia senegalensis</i> | Laughing Dove-R |

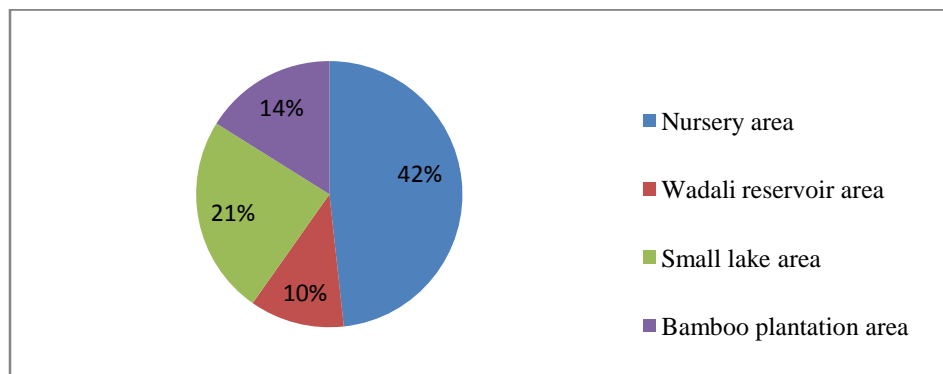
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|----|--------------------------------|---------------------------|---------------------------|
| 30 | Columbidae | Streptopelia chinensis | Spotted Dove–R |
| 31 | Columbidae | Streptopelia decaocta | Eurasian Collared Dove–R |
| 32 | Rallidae | Amauornis phoenicurus | White Breasted Waterhen–R |
| 33 | Rallidae | Porphyrio porphyrio-M | Purple Swanphen–R |
| 34 | Rallidae | Fulica atra-M | Common Coot–RW |
| 35 | Scolopacidae (Tringinae) | Tringa tetanus-M | Common Red Shank–SW |
| 36 | Scolopacidae (Tringinae) | – Tringa glarcola-M | Wood Sandpiper–R |
| 37 | Scolopacidae (Tringinae) | Actitis hypoleucos-M | Common Sand Piper–sW |
| 38 | Charadriidae (Recurvirostrini) | Himantopus himantopus-M | Black winged Stilt–R |
| 39 | Charadriidae | Charadrius dubius-M | Little Ringed Plover–RW |
| 40 | Charadriidae | Vanellus indicus | Red Wattled Lapwing–R |
| 41 | Accipitridae (Accipitrinae) | Milvus migrans | Black Kite–R |
| 42 | Accipitridae (Accipitrinae) | Elanus caeruleus | Black Shoulder Kite–R |
| 43 | Accipitridae (Accipitrinae) | Accipiter badius | Shikra–R |
| 44 | Accipitridae (Accipitrinae) | Butastur teesa | White Eyed Buzzard–R |
| 45 | Podicipedidae | Tachybaptus ruficollis-M | Little grebe–R |
| 46 | Phalacrocoracidae | Phalacrocorax niger | Little cormorant–R |
| 47 | Phalacrocoracidae | Phalacrocorax fuscicollis | Indian Cormorant–R |
| 48 | Phalacrocoracidae | Phalacrocorax carbo | Great Cormorant–R |
| 49 | Ardeidae | Egretta garzetta | Little egret–R |
| 50 | Ardeidae | Ardea cinerea-M | Grey Heron–RW |
| 51 | Ardeidae | Ardea purpurea-M | Purple Heron–R |
| 52 | Ardeidae | Casmerodius albus | Great egret–R |
| 53 | Ardeidae | Bubulcus ibis | Cattle egret–R |
| 54 | Ardeidae | Ardeola grayii | Indian Pond Heron–R |
| 55 | Threskiornithidae | Pseudibis papillosa | Black Ibis–R |
| 56 | Ciconiidae | – Ciconia episcopus-M | Woolly Necked Stork–R |
| 57 | Laniidae | Lanius vittatus | Bay backed Shrike–R |
| 58 | Laniidae | – Lanius schach | Longtailed Shrike–R |
| 59 | Corvidae (Corvini) | Dendrocitta vagabunda | Rufous Treepie–R |
| 60 | Corvidae (Corvini) | Corvus splendens | House Crow–R |
| 61 | Corvidae (Oriolini) | Oriolus oriolus-M | Eurasian Golden Oriole–R |
| 62 | Corvidae (Oriolini) | Pericrocotus cinnamomeus | Small Minivet–R |

| | | | |
|----|---------------------------------|------------------------------|-------------------------|
| 63 | Corvidae (Dicurinae) | Dicrurus macrocercus | Black Drongo-R |
| 64 | Corvidae (Dicurinae) | Dicrurus caerulescens | White Bellied Drongo-R |
| 65 | Corvidae (Aegithinae) | Acgithina tiphia | Common Iora-R |
| 66 | Muscicapidae (Muscicapinae) | Eumyias thalassina-M | Verditer Flycatcher-R |
| 67 | Muscicapidae (Saxicolini) | Copsychus saularis | Oriental magpie Robin-P |
| 68 | Muscicapidae | Saxicoloides fulicata | Indian Robin-R |
| 69 | Sturnidae | Sturnus pagodarum | Brahminy Starling-R |
| 70 | Sturnidae | sturnus contra | Asian Pied Starling-R |
| 71 | Sturnidae | Acridotheres tristis | Common myna-R |
| 72 | Hirundinidae | Hirundo smithii | Wire Tailed Swallow-R |
| 73 | Pycnonotidae | Pycnonotus cafer | Red vented Bulbul-RW |
| 74 | Cisticolidae | Prinia inornata | Plain Prinia-R |
| 75 | Sylviidae (Acrocephalinae) | Orthotomus sutorius | Common Tailor Bird-R |
| 76 | Sturnidae (Sylviinae) | Turdoides caudatus | Common Babbler-R |
| 77 | Sturnidae | Tudoides malcolmi | Large grey Babbler-R |
| 78 | Alaudidae | Ammomasnes phoenicurus | Rufous Tailed lark-R |
| 79 | Alaudidae | Alauda gulgula | Oriental Skylark-R |
| 80 | Nectariniidae (Nectariniini) | Nectarinia zeylonica | Purple Rumped Sunbird-R |
| 81 | Nectariniidae (Nectariniini) | Nectarinia asiatica | Purple Sunbird-R |
| 82 | Passeridae (Passirinae) | Passer domesticus | House Sparrow-R |
| 83 | Passeridae (Motacillinae) | Motacilla alba | White Wagtail-rW |
| 84 | Passeridae (Motacillinae) | Motacilla maderaspatensis | White Browed Wagtail-R |
| 85 | Passeridae (Motacillinae) | Motacilla cinerea | Grey Wagtail-rW |
| 86 | Passeridae (Ploceinae) | Ploceus philippinus | Baya weaver-R |
| 87 | Passeridae (Estrildinae) | Lonchura mala barica | Indian Silverbill-R |

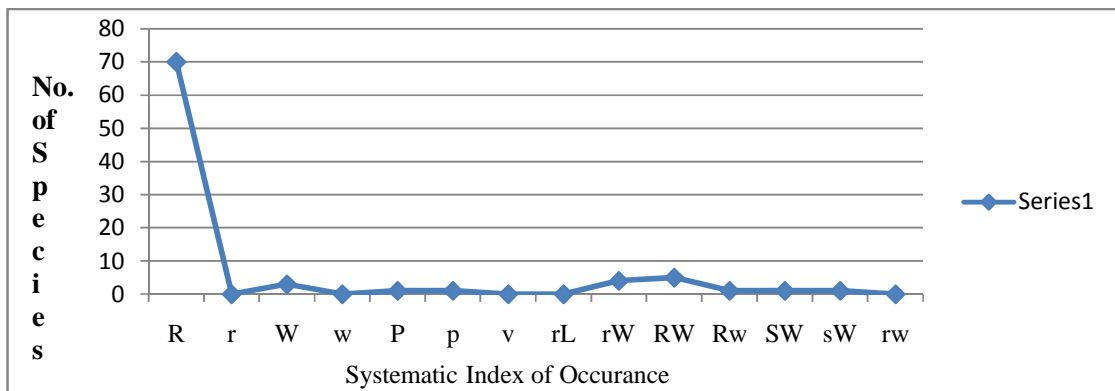
Table- a Taxonomical status of species. (Occurrence details mention below in the graph-c.)



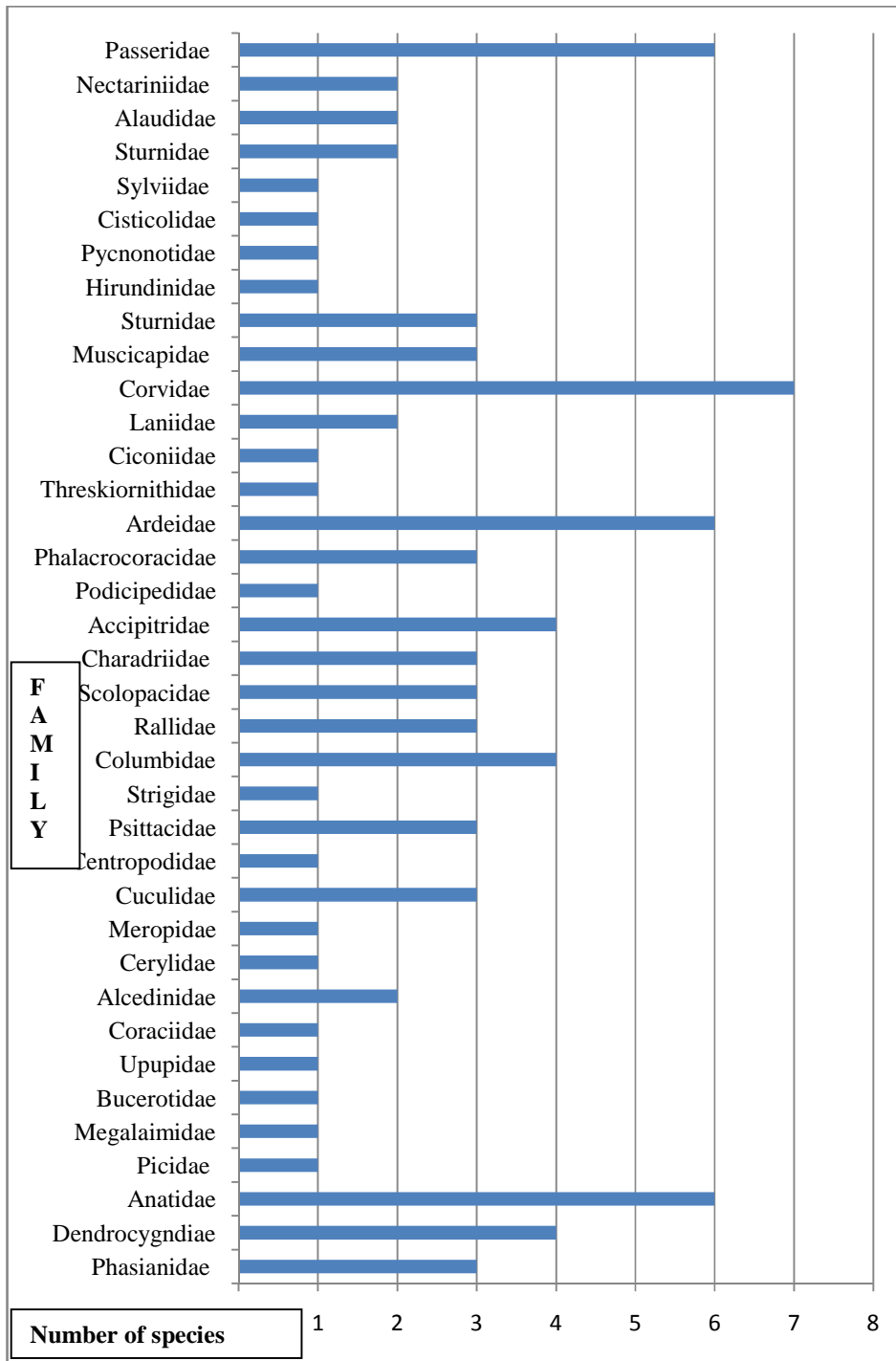
Graph-a Distribution of eighty seven species of Birds within thirteen orders.



Graph-b Abundance Species in Selected Area



Graph-c R- Wide spread resident, r- Very local resident, W- Wide spread winter visitor, w- Sparse winter visitor, P- Wide spread migrant, p- Sparse migrant, V- Vagrant, rL- Introduce resident, rW- Very local resident/ Wide spread winter visitor, RW- Wide spread resident/ Wide spread winter visitor, Rw- Wide spread resident/ Sparse winter visitor.



Graph-d Family wise Distribution of Species.