

AVIFAUNAL DIVERSITY OF MUTHUPET MANGROVE FOREST

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Mangroves harbour a greater variety of bird life than areas such as saltmarshes, mudflats and beaches (MacArthur & MacArthur, 1961). Mangroves enable extensive breeding activity by a number of tree-nesting birds. Little information is available on the birds associated with mangroves in India, except a few studies like 53 species from Bay Islands (Samant, 1985), 24 migratory species from Sunderbans (Naskar & Guhabakshi, 1987) and 166 species from Bhitarkanika Mangroves (Mohanty, 1992). There is no report on the avifaunal communities of Muthupet Mangroves. Hence, the present study was undertaken.

Muthupet Reserved Mangroves (10°46'N lat. and 79°51'E long.) covers an area of about 6003.01 ha. Mangroves constitute 10 per cent of thick vegetation, 20 per cent of waterspread area and remaining area with mudflats and islets. The elevation of the islets ranges from 1 to 4 m. Diurnal type of tidal rhythm was observed throughout the year. Dry season prevails for about 6 to 7 months during February to August. Wet season starts with onset of Northeast monsoon and lasts till December. Salinity of the water ranges from 5 - 47 ppt and soil upto 60 ppt. Texture of the soil is clayey silt. Sethuguda or "silt-bay" is the nutrient rich area of Muthupet. Mangroves and associates include 61 plant species, 6 species of seagrasses, 10 species of seaweed and 6 species of fresh water hydrophytes. Muthupet Mangrove harbours 112 species of insects and 13 species of spiders (Oswin & Kannadasan, 1998), 14 species of crustaceans, 18 species of molluscs, 73 species of finfishes, 10 species of herpetofauna and 13 species of mammals (Oswin, 1998).

Weekly surveys were carried out from September 1993 to January 1998 in the aquatic area by trekking along the dykes and also traversing the wetland by boat. Nests were counted and details of nesting habits were recorded. Checklist of birds was sequenced according to orders and families and season of occurrence was noted.

From the investigation, 160 species of birds belonging to 50 families that use Muthupet Mangroves for feeding, nesting, roosting or other activities (Table 1) were listed. The maximum species were represented by the families Scolopacidae (15),

Laridae (11), Anatidae (9), Ardeidae (9), Charadriidae (9) and Corvidae (9). The mangrove avifauna of Muthupet is divided into six groups based on similarities in methods of procuring food. These groups are wading birds, probing shore birds, floating and diving water birds, aerial-searching birds, birds of prey and arboreal birds. However, arboreal bird group feed and/or nest in the mangrove canopy.

Wading birds: Herons, egrets, ibises, bitterns and spoonbills are the most conspicuous group of birds that are found in mangroves (Table 1). Sixteen species were recorded, eight species are year round residents, six species breed in Muthupet and the others are winter visitors. Mangrove swamps function as the feeding ground for wading birds, since two thirds of these species feed almost exclusively on fishes (Odum *et al.*, 1982). White Ibis feed predominantly on crabs of the genus *Uca* from mangroves (Kushlan & Kushlan, 1975) and spoonbills prefer molluscs and invertebrates of the sediments (Allen, 1942) as has been recorded earlier. Mangroves serve as a breeding ground for large breeding colonies of herons, egrets and ibises. Feeding activity of herons and egrets are observed throughout the year. Successful breeding of all these mangrove nesters is undoubtedly correlated with the abundant supply of fishes associated with mangroves which is also supported by the reports of Odum *et al.* (1982) in Florida Mangroves. Wading birds play an important role in nutrient cycling in the coastal mangrove zone.

Probing shore birds: Birds of this group are commonly found associated with intertidal and shallow water habitats. Plovers, snipes, curlews, whimbrel, sand pipers, turnstone, godwits, stilt, stilt, waterhen and cock, lapwings, flamingoes, moorhens and pratincole come under this group. Plovers and sand pipers are opportunistic feeders taking the most abundant, proper sized invertebrates present in whatever habitat the birds happen to occupy (Wolff, 1969; Schneider, 1978). Of the 31 probing shore birds, (Table 1) six species are year-round residents, 25 species breed in mangroves and the others are migrants or winter visitors. Winter was the most crucial time for the survival of shorebirds (Baker & Baker, 1973) but coincidentally winter is the time when shore birds use mangrove areas (Odum *et al.*, 1982).

Floating and diving water birds: Ducks, grebes, cormorants, teals, geese, coots and pelicans fall under this group. Fifteen species of floating and diving water birds were identified (Table 1). Cormorants are the year-round residents, while others are migrants or winter visitors. From the view of feeding, floating and diving, waterbirds are highly heterogeneous. Cormorants and pelicans are exclusively piscivorous. Pelicans feed primarily in freshwater regions of coastal marshes and prairies and use mangroves where they adjoin this type of habitat. Pintails, ducks and teals are herbivorous. Birds of this group are permanent residents and usually breed in mangrove swamp. Muthupet mangroves supports 39 per cent of waterbirds, although Goodwin (1979) has generally stated that 5 to 10 per cent of the total wintering waterfowl is supported by mangroves.

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Aerially searching birds: Gulls, terns, kingfishers, crows and swifts comprise this group of omnivorous and piscivorous species (Table 1). These birds hunt in ponds, creeks and waterways adjacent to mangrove stands. Many fishes and invertebrates which they feed upon are from mangrove based ecosystems. Twenty three species were identified, and 10 species are year - round residents and 13 are winter visitors. Gulls and terns prefer open sandy areas for nesting (Kushlan & White, 1977) and use mangrove ecosystem for feeding. The birds belonging to this group are observed from a variety of coastal and inland wet-land habitats.

Birds of prey: Kites, harriers, shikra, osprey, owls and kestrel come under this group. Out of 11 species identified, 9 species are permanent residents and 2 are winter visitors (Table 1). Their use of mangrove areas varies greatly from feeding, roosting and nesting. The prey species are the common inhabitants of mangrove areas. These utilize other habitats as well. Kites are observed in flocks near the fish landings. Owls and harriers feed on the chicks of parakeets which are abundant at Muthupet, reptiles, disabled birds and young mammals.

Arboreal birds: This group is the largest and the most diverse group inhabiting the mangroves. Sixty four species (Table 1) identified includes doves, cuckoos, robins, warblers, woodpeckers, flycatchers, parakeet, swallow, thrushers, oriole, sparrow, flowerpecker, quails, bush larks, shrikes, mynas, babblers, bulbuls, pipits, sunbirds, munias, coucal, wagtails, hoopoe, wryneck, larks and iora. Thirty eight species are year round residents and 26 are winter visitors. The divers groups were lumped together, because these birds utilise mangrove ecosystem, remarked in similar ways. Singnificant portion of the diets of these birds includs invertebrates particularly insects, except for a few birds like doves and pigeons, which eat upon the reeds, berries and fruits. Different type of searching patterns were identified (Odum *et al.*, 1982). Hawking of insects is the primary mode of feeding by cuckoos and flycatchers. Gleaning is employed by most of the warblers. Woodpeckers are classic probers. Rose-ringed Parakeets are found of feeding on the ripe fruits of *Prosopis chilensis* at Muthupet. Flocks of parakeets nest onthe pure Avicennia stands. Hence most of these birds from this group have expanded their range from mangrove to non-mangrove habitats, irregular occurence of the birds is noted. Most of the birds were found flocking in the 'blanks' of dense forests and in the shallow regions of the forest. Siltation at Muthupet has created a vast landscape with shallow muddy zones of micro delta formations, where many species of wading and probing water birds feed. Cormorants and pied-kingfishers hunting fish all the time in the lagoon is a scenic beauty. During the onset of monsoon, the winter migrants and visitors dominate the bird population in lagoon. Ibises, spoonbills, egrets and storks roost in the canopy of the dense Avicennia stands creating the scenario of immaculate cloud resting on the canopy till theonset of February. Even though the mangroves are

reserved, poachers hunt the teals, gargeny ducks, geese, innumerable herons and egrets. Birds are accurate indicators of over-all imbalances in a habitat. The diminished health and disappearance of bird species worldwide indicates an environment at risk. The welfare of these avifaunal community is inextricably tied to ours. Conversion of tidal swamps may severely reduce the bird population and the concentration of migratory and winter visitors.

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Table 1. Checklist of birds sighted at Muthupet Reserved Forest area (Common names based on Manakadan et al., 1998)

Common Name	Scientific Name	Abundance	Status	Season of occurrence	Nesting*	No. of nests
<u>Podicipedidae</u>						
1. Little Grebe	<i>Tachybaptus ruficollis</i>	WV	C	Yr	Y,V	15
<u>Pelecanidae</u>						
2. Spot-billed Pelican	<i>Pelecanus philippensis</i>	LM	VC	W	—	—
<u>Phalacrocoracidae</u>						
3. Great Cormorant	<i>Phalacrocorax carbo</i>	LM	VC	W	U*	—
4. Little Cormorant	<i>Phalacrocorax niger</i>	LM	VC	W	—	—
<u>Anhingidae</u>						
5. Darter	<i>Anhinga melanogaster</i>	WV	C	W	U*	—
<u>Ardeidae</u>						
6. Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	L	C	Yr	Y,V	98
7. Cattle Egret	<i>Bubulcus ibis</i>	L	C	Yr	Y,V	51
8. Great Egret	<i>Casmerodius albus</i>	LM	C	W	—	—
9. Grey Heron	<i>Ardea cinerea</i>	LM	R	Yr	Y,V	31
10. Indian Pond Heron	<i>Ardeola grayii</i>	L	C	Yr	Y,V	52
11. Intermediate Egret	<i>Mesophoyx intermedia</i>	LM	R	W	—	—
12. Little Egret	<i>Egretta garzetta</i>	LM	C	Yr	Y,V	53
13. Purple Heron	<i>Ardea purpurea</i>	WV	VR	W	—	—
14. Western Reef-Egret	<i>Egretta gularis</i>	L	C	W	—	—
<u>Ciconiidae</u>						
15. Asian Open-billed Stork	<i>Anastomus oscitans</i>	L	C	Yr	U*	—
16. Painted Stork	<i>Mycteria leucocephala</i>	L	C	Yr	Y,V	75
<u>Threskiornithidae</u>						
17. Asian White Ibis	<i>Threskiornis melanocephalus</i>	LM	R	Yr	U*	—
18. Eurasian Spoonbill	<i>Platalea leucorodia</i>	LM	C	W	U*	—
<u>Phoenicopteridae</u>						
19. Greater Flamingo	<i>Phoenicopterus ruber</i>	M	C	W	—	—
20. Lesser Flamingo	<i>Phoenicopterus minor</i>	LM	R	W	—	—
<u>Anatidae</u>						
21. Bar-headed Goose	<i>Anser indicus</i>	M	R	W	—	—
22. Common Pochard	<i>Aythya ferina</i>	M	R	W	—	—
23. Common Teal	<i>Anas crecca</i>	M	C	W	—	—
24. Cotton Pygmy-Goose	<i>Nettapus coromandelianus</i>	L	R	W	—	—
25. Gadwall	<i>Anas strepera</i>	M	R	W	—	—
26. Garganey	<i>Anas querquedula</i>	M	R	W	—	—
27. Northern Pintail	<i>Anas acuta</i>	M	C	W	—	—
28. Northern Shoveller	<i>Anas clypeata</i>	M	R	W	—	—
29. Spot-billed Duck	<i>Anas poecilorhyncha</i>	LM	C	W	—	—
<u>Accipitridae</u>						
30. Black Kite	<i>Milvus migrans</i>	L	VC	Yr	—	—

Common Name	Scientific Name	Abundance	Status	Season of occurrence	Nesting*	No. of nests
31. Black-shouldered Kite	<i>Elanus caeruleus</i>	L	R	W	—	—
32. Brahminy Kite	<i>Haliastur indus</i>	L	VC	Yr	Y,V	43
33. Eurasian Marsh Harrier	<i>Circus aeruginosus</i>	L	R	Yr	—	—
34. Osprey	<i>Pandion haliaetus</i>	L	R	Yr	—	—
35. Pallid Harrier	<i>Circus macrourus</i>	L	R	W	—	—
36. Shikra	<i>Accipiter badius</i>	L	R	Yr	—	—
<u>Falconidae</u>						
37. Common Kestrel	<i>Falco tinnunculus</i>	L	R	Yr	—	—
<u>Phasianidae</u>						
38. Grey Francolin	<i>Francolinus ponticerianus</i>	L	C	Yr	Y,V	7
39. Indian Peafowl	<i>Pavo cristatus</i>	L	VR	Yr	Y,V	2
40. Jungle Bush-Quail	<i>Peridicula asiatica</i>	L	C	Yr	Y,V	7
<u>Centropodidae</u>						
41. Greater Coucal	<i>Centropus sinensis</i>	L	R	Yr	Y,V	8
<u>Rallidae</u>						
42. Common Coot	<i>Fulica atra</i>	WC	C	W	Y,V	47
43. Common Moorhen	<i>Gallinula chloropus</i>	LM	C	W	Y,V	51
44. Purple Swampphen	<i>Porphyrio porphyrio</i>	LM	C	W	Y,V	102
45. White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	LM	C	W	Y,V	9
46. Watercock	<i>Gallicrex cinerea</i>	LM	R	W	—	—
<u>Jacaniidae</u>						
47. Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>	L	R	W	—	—
<u>Charadriidae</u>						
48. Blackwinged Stilt	<i>Himantopus himantopus</i>	L	C	Yr	—	—
49. Common Ringed Plover	<i>Charadrius hiaticula</i>	L	C	Yr	Y,V	56
50. Greater Sand Plover	<i>Charadrius leschenaultii</i>	M	R	W	—	—
51. Kentish Plover	<i>Charadrius alexandrinus</i>	LM	C	W	—	—
52. Little Ringed Plover	<i>Charadrius dubius</i>	L	C	Yr	Y,V	47
53. Pacific Golden Plover	<i>Pluvialis fulva</i>	M	C	W	—	—
54. Pied Avocet	<i>Recurvirostra avosetta</i>	M	VR	W	—	—
55. Red-wattled Lapwing	<i>Vanellus indicus</i>	L	C	Yr	Y,V	43
56. Yellow-wattled Lapwing	<i>Vanellus malabaricus</i>	L	C	Yr	Y,V	42
<u>Scolopacidae</u>						
57. Bar-tailed Godwit	<i>Limosa lapponica</i>	M	R	W	—	—
58. Black-tailed Godwit	<i>Limosa limosa</i>	LM	R	W	—	—
59. Common Green Shank	<i>Tringa nebularia</i>	M	R	W	—	—
60. Common Red Shank	<i>Tringa totanus</i>	LM	R	W	—	—
61. Common Sandpiper	<i>Actitis hypoleucos</i>	L	C	Yr	Y,V	18
62. Common Snipe	<i>Gallinago gallinago</i>	L	C	W	—	—
63. Eurasian Curlew	<i>Numenius arquata</i>	LM	C	W	—	—
64. Little Stint	<i>Calidris minuta</i>	M	C	W	—	—
65. Marsh Sandpiper	<i>Tringa stagnatilis</i>	LM	C	W	—	—
66. Pin-tailed Snipe	<i>Gallinago stenura</i>	L	C	W	—	—
67. Ruddy Turnstone	<i>Arenaria interpres</i>	M	R	W	—	—

Common Name	Scientific Name	Abundance	Status	Season of occurrence	Nesting*	No. of nests
68. Ruff	<i>Philomachus pugnax</i>	WV	C	W	—	—
69. Terek Sandpiper	<i>Xenus cinereus</i>	M	C	W	—	—
70. Whimbrel	<i>Numenius phaeopus</i>	LM	R	W	—	—
71. Wood Sandpiper	<i>Tringa glareola</i>	M	C	W	—	—
<u>Glareolidae</u>						
72. Crab-plover	<i>Dromas ardeola</i>	WV	R	W	—	—
73. Small Pratincole	<i>Glareola lactea</i>	L	R	W	—	—
<u>Rostratulidae</u>						
74. Greater Painted-Snipe	<i>Rostratula benghalensis</i>	M	R	W	—	—
<u>Burhinidae</u>						
75. Stone-Curlew	<i>Burhinus oedicnemus</i>	WV	R	W	—	—
<u>Laridae</u>						
76. Brown-headed Gull	<i>Larus brunnicephalus</i>	M	C	W	—	—
77. Caspian Tern	<i>Sterna caspia</i>	WV	C	W	—	—
78. Common Black-headed Gull	<i>Larus ridibundus</i>	WC	C	W	—	—
79. Common Tern	<i>Sterna hirundo</i>	L	C	W	—	—
80. Great Black-headed Gull	<i>Larus ichthyaetus</i>	WV	C	W	—	—
81. Gull-billed Tern	<i>Gelochelidon nilotica</i>	M	R	W	—	—
82. Lesser Black-backed Gull?	<i>Larus fuscus?</i>	WV	C	W	—	—
83. Little Tern	<i>Sterna albifrons</i>	WV	C	W	Y,V	17
84. River Tern	<i>Sterna aurantia</i>	L	C	W	—	—
85. Whiskered Tern	<i>Chlidonias hybridus</i>	WV	C	W	—	—
86. Yellow-legged Gull	<i>Larus cachinnans</i>	WV	C	W	—	—
<u>Columbidae</u>						
87. Eurasian Collared-Dove	<i>Streptopelia decaocto</i>	L	C	Yr	Y,V	51
88. Rock Pigeon	<i>Columba livia</i>	L	C	Yr	—	—
89. Spotted Dove	<i>Streptopelia chinensis</i>	L	C	Yr	Y,V	49
<u>Psittacidae</u>						
90. Rose-ringed Parakeet	<i>Psittacula krameri</i>	L	C	Yr	Y,V	207
<u>Cuculidae</u>						
91. Asian Koel	<i>Eudynamis scolopacea</i>	L	C	Yr	A*	—
92. Blue-faced Malkoha	<i>Phaenicophaeus viridirostris</i>	L	R	Yr	Y,V	6
93. Grey-bellied Cuckoo	<i>Cacomantis passerinus</i>	M	R	W	—	—
94. Indian Hawk-Cuckoo	<i>Hierococcyx varius</i>	LM	R	W	—	—
95. Large Hawk-Cuckoo	<i>Hierococcyx sparveroides</i>	LM	C	W	—	—
96. Pied Cuckoo	<i>Clamator jacobinus</i>	L	R	Yr	—	—
<u>Tytonidae</u>						
97. Barn Owl	<i>Tyto alba</i>	L	C	Yr	Y,V	5
<u>Strigidae</u>						
98. Little Owl	<i>Athene noctua</i>	L	C	Yr	Y,V	7
99. Spotted Owlet	<i>Athene brama</i>	L	C	Yr	Y,V	9

Common Name	Scientific Name	Abundance	Status	Season of occurrence	Nesting*	No. of nests
<u>Caprimulgidae</u>						
100. Indian Nightjar	<i>Caprimulgus asiaticus</i>	L	C	Yr	Y,V	7
<u>Apodidae</u>						
101. Asian Palm-Swift	<i>Cypsiurus balasiensis</i>	L	C	Yr	Y,V	15
102. House Swift	<i>Apus affinis</i>	M	C	Yr	Y,V	14
<u>Alcedinidae</u>						
103. Common Kingfisher	<i>Alcedo atthis</i>	L	C	Yr	Y,V	22
<u>Dacelonidae</u>						
104. Black-capped Kingfisher	<i>Halcyon pileata</i>	L	R	Yr	Y,V	2
105. White-throated Kingfisher	<i>Halcyon smyrnensis</i>	L	C	Yr	Y,V	15
<u>Ceryliidae</u>						
106. Lesser Pied Kingfisher	<i>Ceryle rudis</i>	L	C	Yr	—	—
<u>Meropidae</u>						
107. Blue-tailed Bee-eater	<i>Merops philippinus</i>	M	C	W	—	—
108. Green Bee-eater	<i>Merops orientalis</i>	LM	C	W	—	—
<u>Coraciidae</u>						
109. Indian Roller	<i>Coracias benghalensis</i>	L	C	Yr	Y,V	8
<u>Upupidae</u>						
110. Common Hoopoe	<i>Upupa epops</i>	L	C	Yr	Y,V	5
<u>Picidae</u>						
111. Black-rumped Flamebacked Woodpecker	<i>Dinopium benghalense</i>	L	C	Yr	Y,V	2
112. Eurasian Wryneck	<i>Jynx torquilla</i>	WV	VR	W	—	—
<u>Pittidae</u>						
113. Indian Pitta	<i>Pitta brachyura</i>	WV	C	W	—	—
<u>Alaudidae</u>						
114. Ashy-crowned Sparrow-Lark	<i>Eremopterix grisea</i>	M	R	Yr	Y,V	7
115. Crested Lark	<i>Galerida cristata</i>	M	R	Yr	Y,V	8
116. Eastern Skylark	<i>Alauda gulgula</i>	L	C	Yr	Y,V	6
117. Rufous-winged Bush-Lark	<i>Mirafra assamica</i>	L	C	Yr	Y,V	42
<u>Hirundinidae</u>						
118. Red-rumped Swallow	<i>Hirundo daurica</i>	L	C	Yr	Y,V	11
<u>Laniidae</u>						
119. Bay-backed Shrike	<i>Lanius vittatus</i>	M	C	W	—	—
120. Brown Shrike	<i>Lanius cristatus</i>	M	C	W	—	—
121. Long-tailed Shrike	<i>Lanius schach</i>	M	C	W	—	—
<u>Sturnidae</u>						
122. Brahminy Starling	<i>Sturnus pagodarum</i>	L	C	Yr	Y,V	5
123. Chestnut-tailed Starling	<i>Sturnus malabaricus</i>	M	C	W	—	—
124. Common Myna	<i>Acridotheres cristis</i>	L	C	Yr	Y,V	47
<u>Corvidae</u>						
125. Ashy Wood-swallow	<i>Artamus fuscus</i>	L	C	Yr	—	—
126. Asian Paradise-Flycatcher	<i>Tersiphone paradisi</i>	M	R	W	—	—

Common Name	Scientific Name	Abundance	Status	Season of occurrence	Nesting*	No. of nests
127. Black Drongo	<i>Dicrurus macrocercus</i>	L	C	Yr	Y,V	11
128. Common Iora	<i>Aegithina tiphia</i>	L	C	Yr	Y,V	8
129. Eurasian Golden Oriole	<i>Oriolus oriolus</i>	LM	R	W	—	—
130. House Crow	<i>Corvus splendens</i>	L	C	Yr	Y,V	213
131. Jungle Crow	<i>Corvus macrorhynchos</i>	L	C	Yr	Y,V	196
132. Lesser Woodshrike	<i>Tephrodornis pondicerianus</i>	M	C	W	—	—
133. Rufous Treepie	<i>Dendrocitta vagabunda</i>	L	R	Yr	—	—
<u>Pycnonotidae</u>						
134. Himalayan Bulbul	<i>Pycnonotus leucogenys</i>	L	C	Yr	Y,V	71
135. Red-vented Bulbul	<i>Pycnonotus cafer</i>	L	C	Yr	Y,V	67
<u>Muscicapidae</u>						
136. Asian Brown Flycatcher	<i>Muscicapa dauurica</i>	M	R	W	—	—
137. Indian Robin	<i>Saxicoloides fulicata</i>	L	C	Yr	Y,V	3
138. Orange-headed Thrush	<i>Zoothera citrina</i>	M	R	W	—	—
139. Oriental Magpie-Robin	<i>Copsychus saularis</i>	L	C	Yr	Y,V	5
140. Pied Bushchat	<i>Saxicola caprata</i>	LM	R	W	—	—
141. Pied Thrush	<i>Zoothera wardii</i>	M	R	W	—	—
142. Red-throated Flycatcher	<i>Ficedula parva</i>	M	R	W	—	—
143. Tickell's Blue Flycatcher	<i>Cyornis tickelliae</i>	M	R	W	—	—
<u>Sylviidae</u>						
144. Blyth's Reed Warbler	<i>Acrocephalus dumetorum</i>	WV	C	W	—	—
145. Common Tailorbird	<i>Orthotomus sutorius</i>	L	C	Yr	Y,V	37
146. Lesser White-throat	<i>Sylvia curruca</i>	LM	C	W	—	—
147. Pale-capped Babbler	<i>Turdoides affinis</i>	L	C	Yr	Y,V	4
<u>Cisticolidae</u>						
148. Zitting Cisticola	<i>Cisticola juncidis</i>	L	C	Yr	—	—
<u>Passeridae</u>						
149. Baya Weaver	<i>Ploceus philippinus</i>	L	C	W	—	—
150. Grey Wagtail	<i>Motacilla cinerea</i>	M	C	W	Y,V	8
151. House Sparrow	<i>Passer domesticus</i>	L	C	Yr	Y,V	74
152. Long-billed Pipit	<i>Anthus similis</i>	L	C	Yr	Y,V	39
153. Paddyfield Pipit	<i>Anthus rufulus</i>	L	C	Yr	Y,V	43
154. Scaly-breasted Munia	<i>Lonchura punctulata</i>	L	C	W	—	—
155. Yellow Wagtail	<i>Motacilla flava</i>	M	C	W	—	—
<u>Nectariniidae</u>						
156. Purple Sunbird	<i>Nectarinia asiatica</i>	L	C	Yr	Y,V	11
157. Purple-rumped Sunbird	<i>Nectarinia zeylonica</i>	L	C	Yr	Y,V	9
158. Tickell's Flowerpecker	<i>Dicaeum erthrorhynchos</i>	L	C	Yr	Y,V	3
<u>Ploceidae</u>						
159. Black-headed Munia	<i>Lonchura malacca</i>	L	C	W	—	—
<u>Fringillidae</u>						
160. Rose Finch	<i>Carpodacus erythrinus</i>	L	C	Yr	—	—

L - Local; C - Common; VC - Very Common; R - Rare; VR - Very Rare; M - Migrant; LM - Local Migrant; WV - Winter Visitor; Yr - Year round resident; W - Winter resident; Y - Species breeds in Mangroves; U* - Species breeds at Uthayam arthan dapuram; V - Species breeds at the village of Muthupet; A* - Breeds in crow's nest