

## AVIFAUNAL DIVERSITY OF TIRUVERUMBUR TALUK, TAMIL NADU

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Of late there is an increased awareness to prepare checklists of birds on a wider scale (Chakravarthy & Sridhar, 1995), although such monitoring work are often confined to sanctuaries and forest ranges (Kannan, 1998; Burg *et al.*, 1994; Mahabal, 2000). Collective checklists of the state have also been published (Badshah, 1970; Vyas, 1996; Khacher, 1996; Lainer, 1999); for different specific regions like lakes (Rathore & Sharma, 2000; Robertson & Jackson, 1992), wetland (Sivaperuman & Jayson, 2000; Ravindran, 1995; Anonymous, 1993), hills (Kannan, 1998; Burg *et al.*, 1994), wildlife sanctuaries (Vijayan, 1978; Mahabal, 2000; Mahabal & Sharma, 1993), and more recently, university campuses (Palot & Pramod, 2000; Nameer *et al.*, 2000). This survey around human habitation was undertaken to quantify the diversity, abundance and status of avifauna in the following areas of Tiruverumbur Taluk, Tiruchirapalli District: a) residential area of Bharath Heavy Electricals Limited, b) an adjoining perennial lake, c) a farmland, d) Bharathidasan University Office area, and, e) an adjoining seasonal lake to compare the within and between variations in the avifaunal composition.

Tiruverumbur Taluk (78°45'N & 10°45'E) chosen for this study (Fig. 1) is a typical semi arid area with an annual mean rainfall of 728mm. The area covered for the study comprised of: a) 25ac of residential area of BHEL campus out of a total area of 3000 ha. b) 12ac of farm land at Thirunedungulam where organic farming has been practiced for the past five years, c) 17ac of a perennial lake at Kumaresapuram, d) about 40ac of Bharathidasan University Campus, and, e) about 5ac of a seasonal lake at Suriyur.

Observations were made between 600 and 900hr, and 1500 and 1800hr once a week in each study plot for a period of three months from December 2000 to March 2001, covering a distance of about 8km in each trip. The birds sighted using a Nikon 8-20X-Zoom binocular were recorded by drawing rough figures along with the colour of feathers. The vernacular names of the birds were also noted down. The identification, species status, feeding habits (Ali & Ripley, 1983; Manakadan & Pittie, 2001)

and abundance rating (Nameer *et al.*, 2000) of the birds were carried out (Table 1).

In the entire study area, 108 species of birds belonging to 44 families in 17 orders were observed (Table 1). Among these, 38 belonged to the order Passeriformes, 10 each to Falconiformes and Charadriiformes, nine to Ciconiiformes, eight to Anseriformes, seven to Coraciiformes, four each to Gruiformes and Columbiformes, three to Pelicaniiformes, two each to Galliformes and Piciformes and one each to Psittaciformes, Caprimulgiformes and Apodiformes. Of these 23 species (21.29%) were abundant, 51 (47.22%) were common and five (4.62%) were occasional.

Out of the 108 species, 36 (33.3%) were carnivores, 35 (32.4%) omnivores, 21 (19.4%) insectivores, four (3.7%) each were granivores and frugivores and eight (7.4%) were herbivores. The maximum number of species was found on farmland (56.5%) and in the perennial lake (54.6%) (Table 2). From this lake, 59 species were recorded (24 were carnivores, 16 omnivores, 9 insectivores, 5 herbivores, 3 granivores, 2 frugivores). Further, out of the 35 species which live exclusively in aquatic habitat 15 were residents, 15 local migrants and five were migratory.

The rich avian diversity recorded in this lake may be because of no human disturbance. In fact, the main lake has five adjoining smaller ponds of 0.5±2ha, which serve the needs of the local people. The only access is the Trichy-Tanjore railway line, which crosses through the lake. In the seasonal lake of Suriyur, which lies adjoining the University, 33 species were observed (14 carnivores, 8 omnivores, 5 insectivores, 3 granivores, 2 herbivores, 1 frugivore). In this lake out of 18 species which live exclusively in aquatic habitat, 11 were local migrants and three were migratory. Other species like Lapwing, Little Grebe and Stint were able to survive in the wetland even with low amount of water from the adjoining paddy fields. In the Sarasai Nawar Lake with a water spread area of 100ha, Rathore and Sharma (2000) had recorded 95 species and suggested that the lake be given the status of a Sanctuary. In the present study, in Kumaresapuram Lake that has a water spread area of 17ac, 59 species were recorded. This works out to about one species per acre in Sarasai Nawar Lake and 3.4 species per acre in Kumaresapuram Lake indicating very rich avian diversity in the latter.

In Bharathidasan University 46 species were recorded (21 omnivores, 11 carnivores, 8 insectivores, 3 granivores, 2 frugivores, 1 herbivore). Nameer *et al.* (2000) worked on the birds of Kerala Agricultural University campus and recorded 135 species of birds; Palot and Pramod (2000) recorded 124 species of birds in Calicut University Campus, in Kerala. The reasons for recording lesser diversity of birds in Bharathidasan University may be due to the short study period and the location of this University in a tropical semi arid zone.

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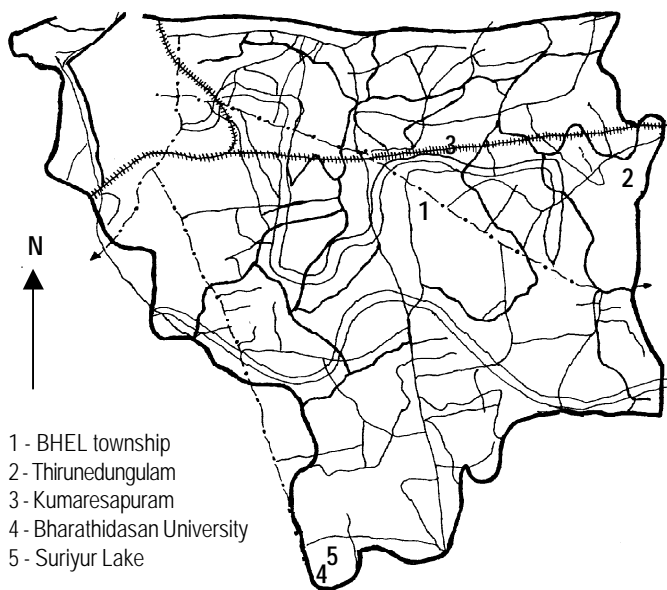


Fig. 1. Map of Tiruverumbur Taluk showing the study area

In the BHEL residential area 51 species of birds were observed (24 omnivores, 11 carnivores, 10 insectivores, 3 granivores, 2 frugivores, 1 herbivore). Jeyaraj (1997) worked on the avifauna of agricultural area and recorded 32 species of birds in a period of four months. The present study revealed 61 species of birds in Thirunedungulam farmland. The rich diversity of birds in this study plot may be because of organic farming practices.

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Table 2. Avian diversity in each study area

Study area	Total number of			%
	Order	Family	Species	
Residential Area	10	27	51	47.22
University Campus	11	28	46	42.59
Farmland	11	25	61	56.48
Perennial lake	13	25	59	54.62
Seasonal lake	12	18	33	30.55

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Table 1. Summary of bird diversity in Thiruverumbur Taluk, Trichirapalli District, Tamil Nadu

Scientific name	English name	Vernacular name	Abundance	Status	Feeding habit	Habitat
<u>Podicipedidae</u>						
<i>Tachybaptus ruficollis</i>	Little Grebe	Mukkulipan	C	R	IN	4, 5
<u>Phalacrocoracidae</u>						
<i>Phalacrocorax carbo</i>	Great Cormorant	Neerkagam	U	LM	CV	4
<i>Phalacrocorax niger</i>	Little Cormorant	Neerkagam	C	LM	CV	4, 5
<u>Anhingidae</u>						
<i>Anhinga melanogaster</i>	Darter	Pambuthara	C	LM	CV	4, 5
<u>Ardeidae</u>						
<i>Ardea cinerea</i>	Grey Heron	Sanibanarai	C	LM	CV	4, 5
<i>Ardea purpurea</i>	Purple Heron	Chennarai	U	LM	CV	4
<i>Casmerodius albus</i>	Large Egret	Periya Vellaikokku	C	LM	CV	4, 5
<i>Ardeola grayii</i>	Indian Pond Heron	Kuru Kokku	A	R	CV	2, 3, 4, 5
<i>Bubulcus ibis</i>	Cattle Egret	Mattu Kokku	A	R	CV	1, 2, 3, 4, 5
<i>Egretta garzetta</i>	Little Egret	Karumooki-vellai Kokku	C	R	CV	4, 5
<i>Nycticorax nycticorax</i>	Black-crowned Night Heron	Patchai Kokku	C	LM	CV	4
<i>Ixobrychus cinnamomeus</i>	Chestnut Bittern	Sengkokku	U	LM	CV	4
<u>Ciconiidae</u>						
<i>Anastomas oscitans</i>	Asian Open-bill Stork	Nathai-kuthi Narai	U	R	CV	4
<u>Anatidae</u>						
<i>Anser indicus</i>	Bar-headed Goose	Goose Vathu	U	LM	HE	4
<i>Dendrocygna javanica</i>	Lesser Whistling-Duck	Chitithara	O	R	OM	4
<i>Anas acuta</i>	Northern Pintail	Marakalian	U	M	HE	4
<i>Anas crecca</i>	Common Teal	Sirali	C	M	HE	4, 5
<i>Anas poecilorhyncha</i>	Spot-billed Duck	Periya Thara	C	LM	HE	4, 5
<i>Anas querquedula</i>	Garganey	Periyasirali	U	M	HE	4
<i>Anas clypeata</i>	Northern Shoveller	Thattavayan	U	M	CV	4
<i>Nettapus coromandelianus</i>	Cotton Teal	Thamarai Sirali	U	R	OM	4
<u>Accipitridae</u>						
<i>Elanus caeruleus</i>	Black-shouldered Kite	Parunthu	U	R	CV	3
<i>Milvus migrans</i>	Black Kite	Pariah Parunthu	A	R	OM	1, 2, 3, 4, 5
<i>Haliastur indus</i>	Brahminy Kite	Karudan	A	R	CV	1, 2, 3, 4, 5
<i>Accipiter badius</i>	Shikra	Vallaru Semparunthu	C	R	CV	1, 2, 3
<i>Accipiter nisus</i>	Eurasian Sparrowhawk	Karimparunthu	C	M	CV	1, 2, 3
<i>Bulastur teesa</i>	White-eyed Buzzard	Parnuhtu	U	R	CV	3
<i>Circus macrourus</i>	Pallid Harrier	Poonai Parunthu	U	M	CV	3
<i>Circus aeruginosus</i>	Western Marsh Harrier	Parunthu	C	M	CV	3
<u>Falconidae</u>						
<i>Falco jugger</i>	Laggar	Vellai Lagudu	O	LM	CV	1, 3
<i>Falco tinnunculus</i>	Common Kestrel	Vallaru	U	LM	CV	
<u>Galliformes</u>						
<i>Amauronis phoenicurus</i>	White-breasted Water	Kanankozhi	U	R	OM	4
<i>Gallinula chloropus</i>	Moorhen	Thazhaikozhi	C	LM	OM	4, 3
<i>Porphyrio porphyrio</i>	Purple Moorhen	Jambukozhi	O	R	OM	4
<i>Fulica atra</i>	Coot	Namakkozhi	C	LM	OM	4, 3
<u>Phasianidae</u>						
<i>Francolinus pondicerianus</i>	Grey Francolin	Kowthari	C	R	OM	1, 2
<i>Pavo cristatus</i>	Indian Peafowl	Myil	C	R	OM	1, 2
<u>Rallidae</u>						
<i>Amauronis phoenicurus</i>	White-breasted Waterhen	Kanankozhi	U	R	OM	4
<i>Gallinula chloropus</i>	Common Moorhen	Thazhaikozhi	C	LM	OM	4, 3
<i>Porphyrio porphyrio</i>	Purple Moorhen	Jambukozhi	O	R	OM	4
<i>Fulica atra</i>	Common Coot	Namakkozhi	C	LM	OM	4, 3
<u>Jacaniidae</u>						
<i>Hydrophasianus chirurgus</i>	Pheasant-tailed Jacana	Val-alli Kuruvi	U	R	OM	4
<u>Charadriidae</u>						
<i>Vanellus indicus</i>	Red-wattled Lapwing	Chivappu-mooku Aalkaati	C	R	IN	4, 5
<i>Vanellus malabaricus</i>	Yellow-wattled Lapwing	Manjal-mooku Aalkaati	C	R	IN	4, 5

Scientific name	English name	Vernacular name	Abundance	Status	Feeding habit	Habitat
<u>Scolopacidae</u>						
<i>Gallinago gallinago</i>	Common Snipe	<i>Kosillam</i>	C	LM	CV	4
<i>Calidris minuta</i>	Little Stint	<i>Myelullan</i>	C	LM	CV	4, 5
<u>Rostratulidae</u>						
<i>Rostratula bengalensis</i>	Greater Painted-Snipe	<i>Pavalakkal Ullan</i>	C	R	OM	4
<u>Recurvirostridae</u>						
<i>Himantopus himantopus</i>	Black-winged Stilt	<i>Mmeessai Ala</i>	O	R	CV	4
<u>Laridae</u>						
<i>Chlidonias hybridus</i>	Whiskered Tern	<i>Atru Ala</i>	C	LM	CV	4, 5
<i>Sterna aurantia</i>	River Tern	<i>Ala</i>	C	R	CV	4, 5
<i>Sterna hirundo</i>	Common Tern	<i>Ala</i>	C	LM	CV	4, 5
<u>Columbidae</u>						
<i>Columba livia</i>	Blue Rock Pigeon	<i>Malai Purah</i>	A	R	GR	1, 2, 3
<i>Streptopelia decaocto</i>	Eurasian Collared-Dove	<i>Valaiyal-kazhuthu Purah</i>	A	R	GR	1, 2, 3
<i>Streptopelia tranquebarica</i>	Red Collared-Dove	<i>Puthupanai Purah</i>	U	R	GR	3
<i>Streptopelia chinensis</i>	Spotted Dove	<i>Manipurah</i>	A	R	GR	1, 2, 3
<u>Psittacidae</u>						
<i>Psittacula krameri</i>	Rose-ringed Parakeet	<i>Pachaikilli</i>	A	R	FR	1, 2, 3, 4
<u>Cuculidae</u>						
<i>Clamator jacobinus</i>	Pied Crested Cuckoo	<i>Kondai Koel</i>	C	LM	OM	1
<i>Hierococcyx varius</i>	Brainfever Bird	<i>Koel</i>	C	R	OM	1, 2, 3
<i>Endynamis scolopacea</i>	Asain Koel	<i>Koel</i>	A	R	OM	1, 2, 3, 4
<i>Phaenicophaeus viridirostris</i>	Small Green-billed Malkoha	<i>Koel</i>	U	R	OM	1, 2, 3
<i>Centropus sinensis</i>	Greater Coucal	<i>Sembaham</i>	C	R	CV	1, 2, 3
<u>Tytonidae</u>						
<i>Tyto alba</i>	Barn Owl	<i>Kottan</i>	C	R	CV	1, 3
<u>Strigidae</u>						
<i>Athene brama</i>	Spotted Owl	<i>Pullianthai</i>	C	R	IN	1, 3
<u>Caprimulgidae</u>						
<i>Caprimulgus asiaticus</i>	Common Indian Nightjar	<i>Pathugai Kuruvi</i>	U	R	IN	3
<u>Apodidae</u>						
<i>Cypsiurus balasiensis</i>	Asian Palm-swift	<i>Uzhavara Kuruvi</i>	C	R	IN	1, 2, 3, 4
<u>Alcedinidae</u>						
<i>Ceryle rudis</i>	Lesser Pied Kingfisher	<i>Periah mean Kothi</i>	C	R	CV	4, 5
<i>Alcedo atthis</i>	Small-blue Kingfisher	<i>Mean Kothi</i>	C	LM	CV	4, 5
<i>Halcyon smyrnensis</i>	White-breasted Kingfisher	<i>Peru mean Kothi</i>	A	R	CV	1, 2, 3, 4, 5
<u>Meropidae</u>						
<i>Merops philippinus</i>	Blue-tailed Bee-eater	<i>Vellithatta</i>	C	LM	IN	1, 4, 5
<i>Merops orientalis</i>	Small Bee-eater	<i>China Panchratai</i>	A	R	IN	1, 2, 3, 4, 5
<u>Coraciidae</u>						
<i>Coracias benghalensis</i>	Indian Roller	<i>Panaggadai</i>	C	R	CV	1, 2, 3
<u>Upupidae</u>						
<i>Upupa epops</i>	Common Hoopoe	<i>Saval Kuruvi</i>	C	LM	IN	1, 2, 3
<u>Capitonidae</u>						
<i>Megalaima haemacephala</i>	Coppersmith Barbet	<i>Chinna Kukkuruva</i>	U	R	FR	1
<u>Picidae</u>						
<i>Dinopium benghalense</i>	Lesser Golden-backed Woodpecker	<i>Marakkothi</i>	C	R	OM	1, 2, 3, 4
<u>Alaudidae</u>						
<i>Eremopterix grisea</i>	Ashy-crowned Sparrow-lark	<i>Kattichittukuruvi</i>	U	R	OM	3
<i>Alauda arvensis</i>	Eurasian Skylark	<i>Vanambadi</i>	A	R	OM	1, 2, 3, 4
<u>Hirundinidae</u>						
<i>Hirundo rustica</i>	Common Swallow	<i>Thailan</i>	A	LM	IN	1, 2, 3, 4

Scientific name	English name	Vernacular name	Abundance	Status	Feeding habit	Habitat
<u>Laniidae</u>						
<i>Lanius excubitor</i>	Great Grey Shrike	<i>Kasappukaran</i>	C	LM	CV	1, 2, 3
<i>Lanius vittatus</i>	Bay-backed Shrike	<i>Asurakili</i>	C	R	CV	1, 2, 3
<u>Oriolidae</u>						
<i>Oriolus oriolus</i>	Eurasian Golden Oriole	<i>Mambazhakuruvi</i>	C	LM	OM	1, 2, 3, 4
<u>Dicruridae</u>						
<i>Dicrurus macrocercus</i>	Black Drongo	<i>Erattaival Kuruvi</i>	A	R	OM	3
<i>Artamus fuscus</i>	Ashy Woodswallow	-	C	R	IN	1, 2, 3
<u>Sturnidae</u>						
<i>Strunus pagodarum</i>	Brahminy Starling	<i>Kondaimyna</i>	A	R	OM	1, 2, 3, 4, 5
<i>Acridotheres tristis</i>	Common Myna	<i>Naganavaippul</i>	A	R	OM	1, 2, 3, 4, 5
<i>Strunus roseus</i>	Rosy Starling	<i>Suraikuruvi</i>	U	M	FR	3
<u>Corvidae</u>						
<i>Dendrocitta vagabunda</i>	Indian Treepie	<i>Mambazhathan</i>	C	R	OM	1, 2, 3, 4, 5
<i>Corvus splendens</i>	House Crow	<i>Kagam</i>	A	R	OM	1, 2, 3, 4, 5
<i>Corvus macrorhynchos</i>	Jungle Crow	<i>Andangkagam</i>	A	R	OM	1, 2, 3, 4
<u>Campephagidae</u>						
<i>Tephrodornis pondicerianus</i>	Common Woodshrike	<i>Kassappakaram</i>	C	R	IN	3
<i>Coracina melanoptera</i>	Black-headed Cuckoo-Shrike	<i>Karunthalai Karichan</i>	C	LM	OM	1
<i>Pericrocotus cinnamomeus</i>	Small Minivet	<i>Milagai Chittu</i>	U	R	IN	3
<u>Pycnonotidae</u>						
<i>Pycnonotus cafer</i>	Red-vented Bulbul	<i>Kondai Kuruvi</i>	A	R	OM	1, 2, 3, 4
<u>Timaliinae</u>						
<i>Turdoides caudatus</i>	Common Babbler	<i>Thavitu Kuruvi</i>	A	R	OM	1, 2, 3, 4
<i>Turdoides malcolmi</i>	Large Grey Babbler	<i>Kaluvaluppan</i>	U	R	IN	2, 3
<u>Monarchinae</u>						
<i>Tersiphone paradisi</i>	Asian Paradise-Flycatcher	<i>Rajawall Kuruvi</i>	U	LM	IN	1
<u>Sylviinae</u>						
<i>Orthotomus sutorius</i>	Common Tailor Bird	<i>Thaiyalkara Kuruvi</i>	O	M	OM	1, 2, 3
<i>Sylvia hortensis</i>	Orphean Warbler	-	O	M	HR	2
<i>Sylvia curruca</i>	Common Lesser White-throat	-	C	M	OM	2,3
<u>Turdinae</u>						
<i>Copsychus saularis</i>	Oriental Magpie-Robin	<i>Vannathikuruvi</i>	C	R	OM	1, 2, 3
<i>Saxicoloides fulvicata</i>	Indian Robin	<i>Carkuruvi</i>	A	R	IN	1, 2, 3
<u>Motacillidae</u>						
<i>Anthus hodgsoni</i>	Oriental Tree Pipit	<i>Nettakkali</i>	U	LM	IN	3
<i>Anthus rufulus</i>	Paddyfield Pipit	-	U	R	IN	3
<i>Motacilla flava</i>	Yellow Wagtail	<i>Manjavalatti</i>	U	LM	IN	4
<i>Motacilla cinerea</i>	Grey Wagtail	<i>Manamparthan</i>	U	M	IN	4
<i>Motacilla maderaspatensis</i>	Large Pied Wagtail	<i>Karuppuvalati</i>	C	R	IN	1, 2, 3
<u>Dicaeidae</u>						
<i>Dicaeum erythrorhynchos</i>	Tickell's Flowerpecker	<i>Pakkuchittu</i>	U	R	FR	4
<u>Nectariniidae</u>						
<i>Nectarinia zeylonica</i>	Purple-rumped Sunbird	<i>Manjal Thenchittu</i>	A	R	OM	1, 2, 3, 5
<i>Nectarinia asiatica</i>	Purple Sunbird	<i>Thenchittu</i>	A	R	OM	1, 2, 3, 5
<u>Passerinae</u>						
<i>Passer domesticus</i>	House Sparrow	<i>Chittukuruvi</i>	C	R	OM	1, 2, 3, 5
<u>Ploceinae</u>						
<i>Ploceus philippinus</i>	Baya Weaver	<i>Thukkanan Kuruvi</i>	C	R	HE	1, 2, 3, 5
<u>Estrildidae</u>						
<i>Lonchura malabarica</i>	White-throated Munia	<i>Vayallata</i>	U	R	OM	3
<i>Lonchura punctulata</i>	Spotted Munia	<i>Porryratnam</i>	C	R	HE	1, 3

C – Common (47.22%), U – uncommon (26.88%), A – abundant (21.29%); O – occasional (4.62%), R – resident (63.89%), LM – local movement (25.0%); M – migratory (11.1%); IN – insectivorous (19.4%); CV – carnivorous (33.3%); HB – herbivorous (7.04%); GR – Granivorous (3.7%); FR – frugivorous (3.7%); OM – omnivorous (32.4%); 1 – Residential area; 2 – University campus; 3 – farm land; 4 – perennial lake; 5 – seasonal lake