



Consolidated checklist of birds in the Pallikaranai Wetlands, Chennai, India

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Pallikaranai wetlands falls between 12°59'N & 80°14'E (Fig. 1), located about 20km south of the Chennai metropolitan area and falls in the Kancheepuram District of Tamil Nadu. The wetland runs along the old Mahabalipuram road parallel to the Buckingham Canal throughout its length in the south west of Chennai. The wetland is an extensive low lying area, covered by a mosaic of aquatic grass species, scrub, marsh, and water logged depressions. It has a catchment of 235km² that includes the urban sprawls of Velachery, Pallikaranai and Navalur. The wetland drains through Okkium Maduvu in Thoraipakkam to the Buckingham Canal, which discharges into the Kovalam Estuary (Care Earth 2002). The area receives 1300mm of annual rainfall (www.wikipedia.com). The most rainfall occurs during the northeast monsoon (September - November) and partially from the

southwest monsoon (June - August). Temperatures vary seasonally; in summer the maximum ranging from 35° to 42° C and in winter from 25° to 34° C (Patnaik & Srihari 2004).

A study conducted by Care Earth in 2002, supported by the Tamil Nadu Pollution Control Board (TNPCB) found that the area has reduced to about 600ha from an earlier extend of 4000-5000 ha (Care Earth 2002; Joint Committee Report 2003; The Hindu 2006). Further it has reduced to 420ha (Care Earth 2005). A fall of about 30% in the wetland area within a span of three years is indeed alarming. The Chennai metropolis waste dump yard occupies a part of these wetlands, and it has effectively choked over 250 acres of prime marsh lands. In spite of the legalized and illicit encroachments, fast developing real estate ventures and various other developments including information technology parks on the banks of the marsh lands has aggravated the wetland depletion (Azeez et al. 2007a).

Realizing the environmental and ecological significance of the area in an expanding metropolis, the government of Tamil Nadu (Gazette notification GO. Ms. No. 52, dated 9 April 2007), declared a part of the Pallikaranai marsh (317.00ha) as a reserve forest (under section 4 of the Tamil Nadu Forest Act, 1882) in order to stall further conversion and protect the urban wetland (Azeez et al. 2007b). Subsequently, systematic and serious action plans are underway to conserve and rejuvenate this wetland ecosystem in a sustained manner. As a part of these efforts, we made a checklist of bird species of the Pallikaranai marshlands.

Methods: The study was conducted during February to August 2007 with two intensive surveys carried out for seven and 10 days respectively. The surveys covered the marsh land extending to the adjacent areas that included residential areas and walled campuses. Field survey was done during 0600 to 1000 hr and 1700 to 1900 hr adopting the line-transect method (Burnham et al. 1980; Bibby et al. 1992; Buckland et al. 1993). The opportunistic counts during other times of the day are also included in the checklist. Birds were recorded by direct sighting and calls. We followed the nomenclature and taxonomic sequence of Grimmett et al. (2000). The status of birds was categorized as Breeding Resident (BR), Winter Visitor (WV) and Vagrant (V) based on Grimmett et al. (2000). We also referred to the published and unpublished surveys conducted by different organizations and individuals in the past to complement our checklist (mainly Care Earth 2005, and unpublished work of the fourth author conducted during the year 2000).

Result and Discussion: In total, 101 species of resident and migratory birds were recorded from the Pallikaranai marshlands (Appendix 1). Of the total birds seen, 76 species were breeding residents and 25 winter

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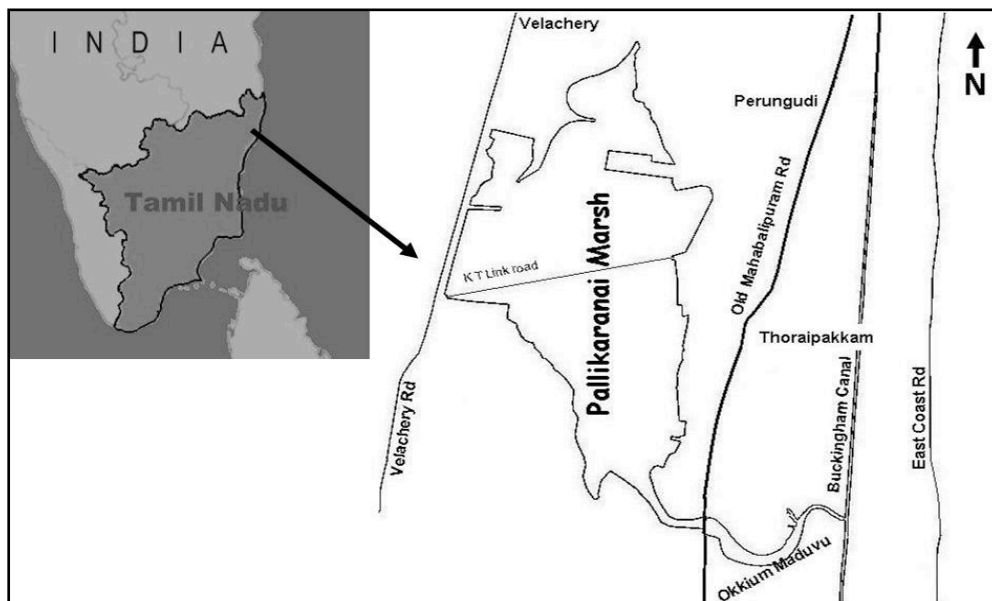


Figure 1. Map of Pallikaranai marsh

visitors. 40 species were fully aquatic, while 10 were partly dependent on wetlands. Among these species, the most numerous in our records included Little Grebe (ca.700) and Black-winged Stilt (ca.150). In a study conducted during the year 2000, 836 Black-winged Stilts and 834 Cattle Egrets were recorded (J. Subramanian pers. obs.). The Pallikaranai marshlands also include two Near Threatened bird species such as Spot-billed Pelican *Pelecanus philippensis* and Black-headed Ibis *Threskiornis melanocephalus*. During our surveys we found one Spot-billed Pelican in the wetlands; however, The Hindu released a report on 06 February 2007 with sightings of nearly 200 individuals in the Pallikaranai marshes. We could observe nearly 70 Black-headed Ibis, another Near Threatened species during the survey. The diversity of avifauna that occur in large numbers here calls for conservation of the Pallikaranai wetlands and prevention from further degradation so that it sustains as wetland for posterity offering the metropolis many ecological services. Conservation of such urban wetlands is essential to sustain migratory bird populations, as it is probably an abode during their migratory route, serving a vital role in the conservation of these species. Unfortunately, there is no laws till date to protect urban wetlands in particular, and we highlight here the urgent need for a policy to conserve urban wetlands and related ecosystems.

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Appendix 1. Bird species recorded in and around Pallikaranai Marsh

	Common name	Scientific name	Habitat	Status
1	Little Grebe **	<i>Tachybaptus ruficollis</i>	A	BR
2	Little Cormorant **^	<i>Phalacrocorax niger</i>	A	BR
3	Great Cormorant #^	<i>Phalacrocorax carbo</i>	A	BR
4	Spot-billed Duck #	<i>Anas poecilorhyncha</i>	A	BR
5	Grey Heron **^	<i>Ardea cinerea</i>	A	WV
6	Purple Heron **^	<i>Ardea purpurea</i>	A	BR
7	Cattle Egret **^	<i>Bubulcus ibis</i>	D	BR
8	Great Egret #^	<i>Casmerodius albus</i>	A	BR
9	Intermediate Egret **^	<i>Mesophoyx intermedia</i>	A	BR
10	Little Egret **^	<i>Egretta garzetta</i>	A	BR
11	Indian Pond Heron **^	<i>Ardeola grayii</i>	A	BR
12	Black-crowned Night Heron **	<i>Nycticorax nycticorax</i>	A	BR
13	Black Bittern #	<i>Dupetor flavicollis</i>	A	BR
14	Cinnamon Bittern #	<i>Ixobrychus cinnamomeus</i>	A	BR
15	Yellow Bittern #	<i>Ixobrychus sinensis</i>	A	WV
16	Spot-billed Pelican *	<i>Pelecanus philippensis</i>	A	BR
17	Asian Openbill #^	<i>Anastomus oscitans</i>	A	BR
18	Woolly-necked Stork #	<i>Ciconia episcopus</i>	A	BR
19	Glossy Ibis **	<i>Plegadis falcinellus</i>	A	WV
20	Black-headed Ibis **	<i>Threskiornis melanocephalus</i>	A	BR
21	Black Kite #^	<i>Milvus migrans</i>	O	BR
22	Black-shouldered Kite **^	<i>Elanus caeruleus</i>	O	WV
23	Brahminy Kite #^	<i>Haliastur indus</i>	O	BR
24	Pallid Harrier #	<i>Circus macrourus</i>	O	WV
25	Pied Harrier #	<i>Circus melanoleucos</i>	O	WV
26	Eurasian Marsh Harrier **	<i>Circus aeruginosus</i>	D	WV
27	Shikra **^	<i>Accipiter badius</i>	O	BR
28	Common Kestrel #	<i>Falco tinnunculus</i>	O	WV
29	Common Moorhen **^	<i>Gallinula chloropus</i>	A	BR
30	Purple Swampen #^	<i>Porphyrio porphyrio</i>	A	BR
31	Coot **^	<i>Fulica atra</i>	A	BR
32	Eurasian Thick-knee #^	<i>Burhinus oedicnemus</i>	A	BR
33	Great Thick-knee #	<i>Burhinus recurvirostris</i>	A	BR
34	Red-necked Phalarope #	<i>Phalaropus lobatus</i>	A	BR
35	Pheasant-tailed Jacana **^	<i>Hydrophasianus chirurgus</i>	A	BR
36	Red-wattled Lapwing **^	<i>Vanellus indicus</i>	D	BR
37	Yellow-wattled Lapwing **^	<i>Vanellus malabaricus</i>	D	BR
38	Black-winged Stilt **	<i>Himantopus himantopus</i>	A	BR
39	Wood Sandpiper #	<i>Tringa glareola</i>	A	WV
40	Marsh Sandpiper **	<i>Tringa stagnatilis</i>	A	WV
41	Oriental Pratincole#	<i>Glareola maldivarum</i>	A	WV
42	Black-tailed Godwit #	<i>Limosa limosa</i>	A	WV
43	White-breasted Waterhen **^	<i>Amauromis phoenicurus</i>	A	BR
44	Watercock #^	<i>Gallicrex cinerea</i>	A	WV

	Common name	Scientific name	Habitat	Status
45	Greater Painted-snipe #^	<i>Rostratula benghalensis</i>	A	BR
46	Little Ringed Plover **^	<i>Charadrius dubius</i>	A	BR
47	Grey Plover **	<i>Pluvialis squatarola</i>	A	WV
48	River Tern **^	<i>Sterna aurantia</i>	A	BR
49	Whiskered Tern #	<i>Chlidonias hybridus</i>	A	WV
50	White-winged Tern #	<i>Chlidonias leucopterus</i>	A	WV
51	Gull-billed Tern #	<i>Gelochelidon nilotica</i>	A	WV
52	Rock Pigeon **^	<i>Columba livia</i>	O	BR
53	Spotted Dove **	<i>Streptopelia chinensis</i>	O	BR
54	Rose-ringed Parakeet #	<i>Psittacula krameri</i>	O	BR
55	Asian Koel **	<i>Eudynamis scolopacea</i>	O	BR
56	Common Hawk Cuckoo #	<i>Hierococcyx varius</i>	O	BR
57	Pied Cuckoo #^	<i>Clamator jacobinus</i>	O	BR
58	Spotted Owlet #	<i>Athene brama</i>	O	BR
59	Barn Owl #	<i>Tyto alba</i>	O	BR
60	Common Kingfisher **^	<i>Alcedo atthis</i>	O	BR
61	White-throated Kingfisher **^	<i>Halcyon smyrnensis</i>	D	BR
62	Pied Kingfisher **^	<i>Ceryle rudis</i>	D	BR
63	Indian Roller #^	<i>Coracias benghalensis</i>	O	BR
64	Blue-tailed Bee-eater #^	<i>Merops philippinus</i>	O	WV
65	Green Bee-eater **^	<i>Merops orientalis</i>	O	BR
66	Hoopoe #	<i>Upupa epops</i>	O	BR
67	House Swift #	<i>Apus affinis</i>	O	BR
68	Asian Palm Swift #^	<i>Cypsiurus balasiensis</i>	O	BR
69	Black-rumped Flameback #	<i>Dinopium benghalense</i>	O	BR
70	Barn Swallow **	<i>Hirundo rustica</i>	O	WV
71	Wire-tailed Swallow #^	<i>Hirundo smithii</i>	O	WV
72	Ashy-crowned Sparrow Lark #	<i>Eremopterix grisea</i>	O	BR
73	Oriental Skylark #	<i>Alauda gulgula</i>	O	BR
74	Common Myna **^	<i>Acridotheres tristis</i>	O	BR
75	Brahminy Starling #	<i>Sturnus pagodarum</i>	O	WV
76	House Crow **^	<i>Corvus splendens</i>	O	BR
77	Large-billed Crow **	<i>Corvus macrorhynchus</i>	O	BR
78	Rufous Treepie **	<i>Dendrocitta vagabunda</i>	O	BR
79	Red-vented Bulbul **^	<i>Pycnonotus cafer</i>	O	BR
80	Red-whiskered Bulbul #	<i>Pycnonotus jocosus</i>	O	BR
81	Yellow-billed Babbler **	<i>Turdoides affinis</i>	O	BR
82	Common Tailorbird **	<i>Orthotomus sutorius</i>	O	BR
83	Ashy Prinia **	<i>Prinia socialis</i>	O	BR
84	Plain Prinia **	<i>Prinia inornata</i>	O	BR
85	Blyth's Reed Warbler **	<i>Acrocephalus dumetorum</i>	O	WV
86	Zitting Cisticola **^	<i>Cisticola juncidis</i>	O	BR
87	Pied Bush Chat **	<i>Saxicola caprata</i>	O	BR
88	Oriental Magpie Robin #	<i>Copsychus saularis</i>	O	BR
89	Orange-headed Thrush #	<i>Zoothera citrina</i>	O	WV
90	Yellow Wagtail **^	<i>Motacilla flava</i>	D	WV

	Common name	Scientific name	Habitat	Status
91	White-browed Wagtail #^	<i>Motacilla maderaspatensis</i>	O	BR
92	Paddy-field Pipit **^	<i>Anthus rufulus</i>	D	BR
93	Richard's Pipit #	<i>Anthus richardi</i>	D	WV
94	House Sparrow **	<i>Passer domesticus</i>	O	BR
95	Streaked Weaver #	<i>Ploceus manyar</i>	O	BR
96	Black-headed Munia #	<i>Lonchura malacca</i>	D	BR
97	Black Drongo **^	<i>Dicrurus adsimilis</i>	O	BR
98	Ashy Woodswallow #	<i>Artamus fuscus</i>	O	BR
99	Eurasean Golden Oriole #	<i>Oriolus oriolus</i>	O	BR
100	Loten's Sunbird #	<i>Nectarinia lotenia</i>	O	BR
101	Grey Francolin #^	<i>Francolinus pondicerianus</i>	O	BR

BR - Breeding Resident; V - Vagrant; WV - Winter Visitor; A - Aquatic; D - Water dependent; O - Others;
 * - Present study; # - Care Earth 2002; ^ - J. Subramanian (Unpublished)

