

Conservation Area Series 31

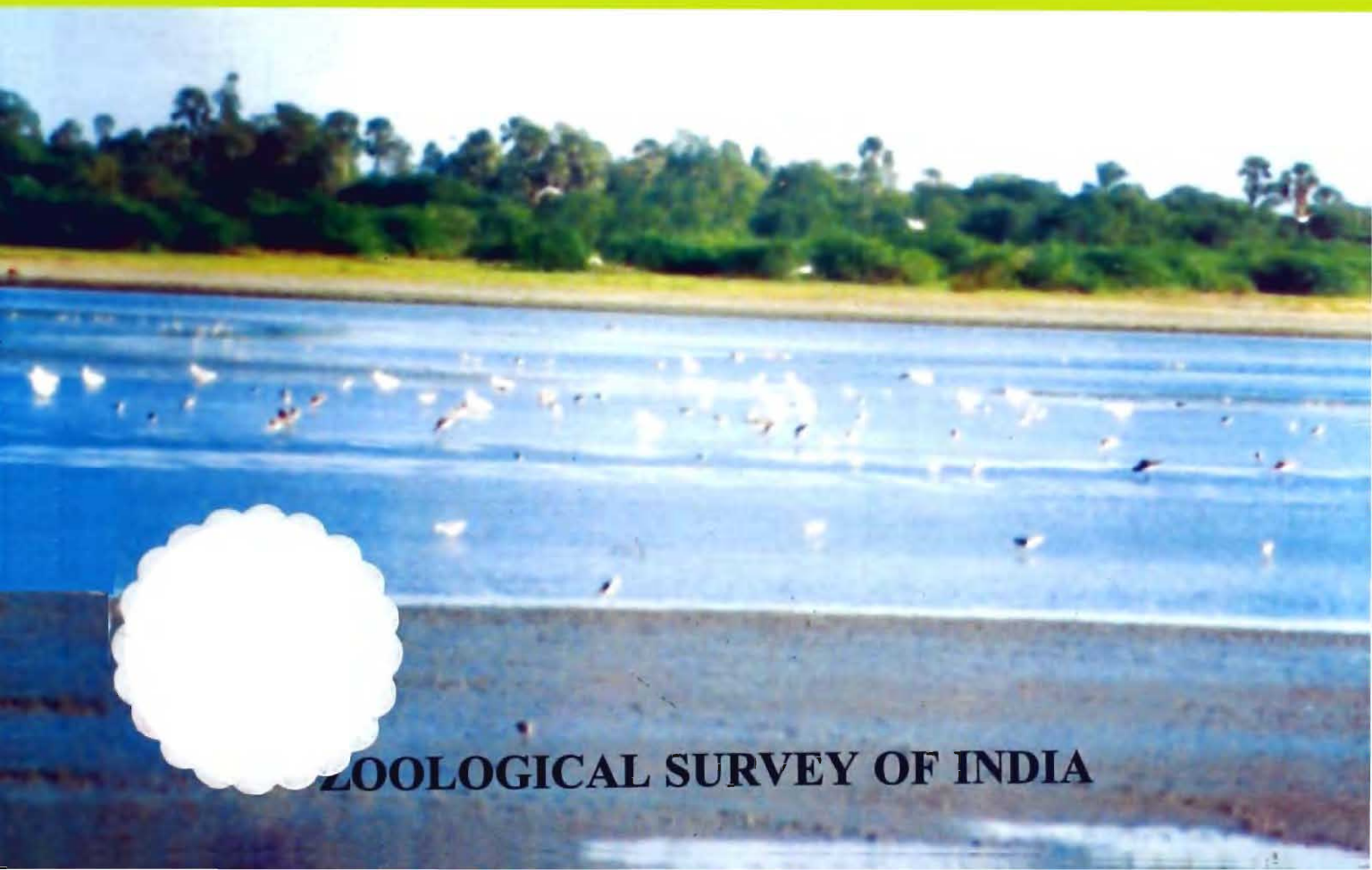
Avifaunal Composition of Point Calimere Wildlife and Bird Sanctuary

T.P. Bhattacharyya

A.K. Sett

R. Sakthivel

S. Anand



ZOOLOGICAL SURVEY OF INDIA

Conservation Area Series : 31

**Avifaunal Composition of
Point Calimere Wildlife and Bird Sanctuary,
Tamil Nadu**

T.P. BHATTACHARYYA

A.K. SETT

R. SAKTHIVEL

S. ANAND*

Zoological Survey of India, M-Block, New Alipore, Kolkata-700 053

** Field Biologist, Point Calimere Wildlife & Bird Sanctuary,*

Deptt. of Forests, Govt. of Tamil Nadu, Point Calimere



**Zoological Survey of India
Kolkata**

CITATION

Bhattacharyya, T.P.; Sett, A.K.; Sakthivel, R. and Anand, S. 2006. *Avifaunal Composition of Point Calimere Wildlife and Bird Sanctuary, Tamil Nadu. Conservation Area Series, 31* : 1-62+8 Plates, (Published by the Director, *Zool. Surv. India*, Kolkata)

Published : November, 2006

ISBN 81-8171-128-9

© Govt. of India, 2006

ALL RIGHTS RESERVED

- No part of this publication may be reproduced stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior permission of the publisher.
- This book is sold subject to the condition that it shall not, by way of trade, be lent, resold hired out or otherwise disposed of without the publisher's consent, in an form of binding or cover other than that in which, it is published.
- The correct price of this publication is the price printed on this page. Any revised price indicated by a rubber stamp or by a sticker or by any other means is incorrect and should be unacceptable.

PRICE

Indian Rs. 200.00

Foreign \$ 15 £ 10

Published at the Publication Division, by the Director, Zoological Survey of India, 234/4 A.J.C. Bose Road, 2nd MSO Building, Nizam Palace (13th floor), Kolkata - 700 020 and printed at Krishna Printing Works, Kolkata - 700 006.

AVIFAUNAL COMPOSITION OF POINT CALIMERE WILDLIFE AND BIRD SANCTUARY, TAMIL NADU

Conservation Area Series

No. 31

2006

1-62

CONTENTS

INTRODUCTION	1
STUDY AREA	1
HISTORICAL BACKGROUND.....	2
CLIMATE	2
SOIL.....	2
METHODOLOGY	3
SYSTEMATIC ACCOUNT	3
<i>Pelecanus philippensis</i> Gmelin	3
<i>Phalacrocorax niger</i> (Vieillot)	3
<i>Anhinga rufa melanogaster</i> Pennant	4
<i>Ardea cinerea</i> Linnaeus	4
<i>Ardea purpurea</i> Linnaeus.....	4
<i>Butorides striatus javanicus</i> (Horsfield)	4
<i>Ardeola grayii</i> (Sykes)	5
<i>Bubulcus ibis coromandus</i> (Boddaert)	5
<i>Bubulcus ibis coromandus</i> (Boddaert)	5
<i>Egretta intermedia</i> (Wagler)	5
<i>Egretta garzetta</i> (Linnaeus).....	6
<i>Egretta gularis schistacea</i> (Hemprich & Ehrenberg).....	6
<i>Nycticorax nycticorax</i> (Linnaeus)	6
<i>Ixobrychus cinnamomeus</i> (Gmelin)	6
<i>Ixobrychus flavicollis</i> (Latham)	7
<i>Mycteria leucocephala</i> (Pennant)	7
<i>Anastomus oscitans</i> (Boddaert)	7
<i>Ciconia episcopus</i> (Boddaert)	7
<i>Ciconia ciconia</i> (Linnaeus).....	8

<i>Threskiornis aethiopica melanocephala</i> (Latham)	8
<i>Pseudibis papillosa</i> (Temminck)	8
<i>Plegadis falcinellus</i> (Linnaeus)	8
<i>Platalea leucorodia</i> Linnaeus	9
<i>Phoenicopterus roseus</i> Pallas	9
<i>Dendrocygna javanica</i> (Horsfield)	9
<i>Tadorna ferruginea</i> (Pallas)	10
<i>Anas acuta</i> (Linnaeus)	10
<i>Anas crecca</i> Linnaeus	10
<i>Anas poecilorhyncha</i> J.R. Forster	10
<i>Anas penelope</i> Linnaeus	11
<i>Anas querquedula</i> Linnaeus	11
<i>Anas clypeata</i> Linnaeus	11
<i>Aythya ferina</i> (Linnaeus)	11
<i>Milvus migrans govinda</i> Sykes	12
<i>Haliastur indus</i> (Boddaert)	12
<i>Accipiter badius</i> (Gmelin)	12
<i>Accipiter nisus</i> (Linnaeus)	13
<i>Hieraaetus pennatus</i> (Gmelin)	13
<i>Aquila rapax</i> (Temminck)	13
<i>Circus aeruginosus</i> (Linnaeus)	13
<i>Spilornis cheela</i> (Latham)	13
<i>Falco biarmicus</i> Temminck	14
<i>Falco peregrinus</i> Tunstall	14
<i>Francolinus pondicerianus</i> (Gmelin)	14
<i>Coturnix coromandelica</i> (Gmelin)	15
<i>Perdica asiatica</i> (Latham)	15
<i>Galloperdix spadicea</i> (Gmelin)	15
<i>Pavo cristatus</i> Linnaeus	15
<i>Turnix tanki</i> Blyth	16
<i>Turnix suscitator</i> (Gmelin)	16
<i>Prozana fusca</i> (Linnaeus)	16
<i>Amourornis phoenicurus</i> (Pennant)	16
<i>Gallinula chloropus</i> (Linnaeus)	17

<i>Porphyrio porphyrio</i> Linnaeus	17
<i>Hydrophasianus chirurgus</i> (Scopoli)	17
<i>Metopidius indicus</i> (Latham).....	17
<i>Vanellus indicus</i> (Boddaert)	18
<i>Vanellus malabaricus</i> (Boddaert)	18
<i>Pluvialis squatarola</i> (Linnaeus).....	18
<i>Pluvialis dominica fulva</i> (Gmelin)	18
<i>Charadrius leschenaultii</i> Lesson	19
<i>Charadrius asiaticus</i> Pallas	19
<i>Charadrius dubius</i> Scopoli	19
<i>Charadrius alexandrinus</i> Linnaeus	19
<i>Charadrius mongolus</i> Pallas	20
<i>Numenius phaeopus</i> (Linnaeus)	20
<i>Numenius arquata</i> (Linnaeus).....	20
<i>Limosa limosa</i> (Linnaeus).....	20
<i>Tringa totanus</i> (Linnaeus)	20
<i>Tringa stagnitilis</i> (Bechstein).....	21
<i>Tringa nebularia</i> (Gunnerus)	21
<i>Tringa ochropus</i> Linnaeus	21
<i>Tringa glareola</i> Linnaeus	21
<i>Tringa terek</i> (Latham)	22
<i>Tringa hypoleucos</i> Linnaeus	22
<i>Arenaria interpres</i> (Linnaeus).....	22
<i>Gallinago stenura</i> Bonaparte	22
<i>Gallinago gallinago</i> (Linnaeus)	23
<i>Gallinago minima</i> (Brunnich).....	23
<i>Calidris alba</i> (Pallas)	23
<i>Calidris minuta</i> (Leister)	23
<i>Calidris temminckii</i> (Leisler).....	24
<i>Calidris subminuta</i> (Midendorff)	24
<i>Calidris alpina</i> (Linnaeus)	24
<i>Calidris testacea</i> (Pallas)	24
<i>Eurynorhynchus pygmaeus</i> (Linnaeus).....	25
<i>Limicola falcinellus</i> (Pontoppidan)	25

<i>Philomachus pugnax</i> (Linnaeus)	25
<i>Phalaropus lobatus</i> (Linnaeus).....	25
<i>Rostratula benghalensis</i> (Linnaeus).....	26
<i>Himantopus himantopus</i> (Linnaeus).....	26
<i>Recurvirostra avocetta</i> Linnaeus	26
<i>Dromas ardeola</i> Paykull	26
<i>Burhinus oedicephalus</i> (Linnaeus)	27
<i>Esacus maganirostris recurvirostris</i> (Cuvier)	100
<i>Glareola pratincola</i> (Linnaeus)	27
<i>Glareola lactea</i> Temminck	28
<i>Larus argentatus</i> Pontopiddan	28
<i>Larus fuscus</i> Linnaeus	28
<i>Larus brunnicephalus</i> Jerdon	28
<i>Larus rudibundus</i> Linnaeus	29
<i>Chlidonias hybridus</i> (Pallas)	29
<i>Sterna aurantia</i> J.E. Gray	29
<i>Sterna hirundo</i> Linnaeus	29
<i>Sterna acuticauda</i> J.E. Gray	30
<i>Sterna anaethetus</i> Scopoli	30
<i>Sterna albifrons</i> Pallas	30
<i>Sterna bergii</i> Lichtenstein	30
<i>Sterna bengalensis</i> Lesson	31
<i>Sterna sandvicensis</i> Latham	31
<i>Treron phoenicoptera</i> (Latham)	31
<i>Columba livia</i> Gmelin	31
<i>Streptopelia decaocto</i> (Frisvaldszky)	32
<i>Streptopelia chinensis</i> (Gmelin).....	32
<i>Psittacula krameri</i> (Scopoli)	32
<i>Psittacula cyanocephala</i> (Linnaeus).....	32
<i>Clamator jacobinus</i> (Boddaert)	33
<i>Eudynamis scolopacea</i> (Linnaeus)	33
<i>Rhopodytes viridirostris</i> (Jerdon)	33
<i>Centropus sinensis</i> (Stephens)	33
<i>Tyto alba</i> (Scopoli)	34

<i>Ous bakkamoena</i> Pennant	34
<i>Glaucidium radiatum</i> (Tickell)	34
<i>Athene brama</i> (Temminck)	34
<i>Caprimulgus indicus</i> Latham	35
<i>Caprimulgus asiaticus</i> Latham	35
<i>Chaetura gigantea indica</i> Hume	35
<i>Chaetura sylvatica</i> (Tickell)	36
<i>Apus affinis</i> (J.E., Gray)	36
<i>Cypsiurus parvus</i> (Lichtenstein)	36
<i>Ceryle rudis</i> (Linnaeus)	36
<i>Alcedo atthis</i> (Linnaeus)	37
<i>Pelargopsis capensis</i> (Linnaeus)	37
<i>Halcyon smyrnensis</i> (Linnaeus)	37
<i>Merops leschenaulti</i> (Vieillot)	37
<i>Merops philippinus</i> Linnaeus	38
<i>Merops orientalis</i> Latham	38
<i>Coracius benghalensis</i> (Linnaeus)	38
<i>Eurystomus orientalis</i> (Linnaeus)	39
<i>Upupa epops</i> Linnaeus	39
<i>Megalaima zeylanica</i> (Gmelin)	39
<i>Megalaima haemacephala indica</i> (Latham)	39
<i>Dinopium benghalense</i> (Linnaeus)	40
<i>Chrysocolaptes lucidus</i> (Scopoli)	40
<i>Pitta brachyura</i> (Linnaeus)	40
<i>Mirafra assamica</i> Horsfield	40
<i>Mirafra erythroptera</i> Blyth	41
<i>Eremopterix grisea</i> (Scopoli)	41
<i>Galerida malabarica</i> (Scopoli)	41
<i>Alauda gulgula</i> Franklin	41
<i>Hirundo rustica</i> Linnaeus	42
<i>Hirundo daurica</i> Linnaeus	42
<i>Lanius vittatus</i> Valenciennes	42
<i>Lanius schach caniceps</i> Blyth	42
<i>Oriolus oriolus kindoo</i> Sykes	43

<i>Oriolus xanthornus</i> (Linnaeus).....	43
<i>Dicrurus adsimilis</i> (Bechstein)	43
<i>Dicrurus leucophaeus</i> Vieillot	44
<i>Dicrurus hottentottus</i> (Linnaeus).....	44
<i>Artamus fuscus</i> Vieillot	44
<i>Sturnus malabaricus</i> (Gmelin)	44
<i>Strunus pagodarum</i> (Gmelin)	45
<i>Sturnus roseus</i> (Linnaeus).....	45
<i>Sturnus contra</i> Linnaeus	45
<i>Acridotheres tristis</i> (Linnaeus)	45
<i>Dendrocitta vagabunda</i> (Latham)	46
<i>Corvus splendens</i> Vieillot	46
<i>Corvus macrorhynchos</i> Wagler	46
<i>Tephrodornis pondicerianus</i> (Gmelin).....	46
<i>Coracina novaehollandiae</i> (Gmelin)	47
<i>Coracina melanoptera</i> (Ruppell).....	47
<i>Pericrocotus flammeus</i> (Forster)	47
<i>Aegithina tiphia</i> (Linnaeus).....	47
<i>Chloropsis cochinchinesis</i> (Gmelin).....	47
<i>Irena puella</i> (Latham)	48
<i>Pycnonotus jacosus</i> (Linnaeus).....	48
<i>Pycnonotus cafer</i> (Linnaeus).....	48
<i>Pycnonotus luteolus</i> (Lesson)	48
<i>Pomatorhinus schisticeps</i> Hodgson	49
<i>Dumetia hyperythra</i> (Franklin)	49
<i>Chrysomma sinense</i> (Gmelin).....	49
<i>Turdoides caudatus</i> (Dumont)	49
<i>Turdoides striatus</i> (Dumont)	50
<i>Turdoides affinis</i> (Jerdon)	50
<i>Muscicapa parva</i> Bechstein	50
<i>Muscicapa tickelliae</i> (Blyth)	50
<i>Muscicapa thalassina</i> Swainson	51
<i>Rhipidura aureola</i> Lesson	51
<i>Terpsiphone paradisi</i> (Linnaeus).....	51

<i>Monarcha azurea</i> (Boddaert)	51
<i>Prinia hodgsonii</i> Blyth	51
<i>Prinia subflava</i> (Gmelin).....	52
<i>Prinia socialis</i> Sykes	52
<i>Orthotomus sutorius</i> (Pennant).....	52
<i>Acrocephalus stentoreus</i> (Hemprich & Ehrenberg)	52
<i>Acrocephalus dumetorum</i> Blyth	53
<i>Hippolais caligata</i> (Lichtenstein)	53
<i>Sylvia curruca</i> (Linnaeus).....	53
<i>Phylloscopus trochiloides</i> (Sundevall)	53
<i>Copsychus saularis</i> (Linnaeus).....	54
<i>Saxicola caprata</i> (Linnaeus).....	54
<i>Saxicoloides fulicata</i> (Linnaeus)	54
<i>Turdus merula</i> Linnaeus	54
<i>Anthus novaeseelandiae</i> Gmelin	55
<i>Anthus godlewskii</i> (Teczanowski)	55
<i>Motacilla indica</i> Gmelin	55
<i>Motacilla flava</i> Linnaeus	55
<i>Motacilla caspica</i> (Gmelin).....	56
<i>Motacilla alba</i> Linnaeus	56
<i>Dicaeum erythrorhynchos</i> (Latham).....	56
<i>Motacilla maderaspatensis</i> Gmelin	56
<i>Nectarinia zeylonica</i> (Linnaeus).....	57
<i>Nectarinia lotenia</i> (Linnaeus)	57
<i>Nectarinia asiatica</i> (Latham).....	57
<i>Zosterops palpebrosa</i> (Temminck)	57
<i>Passer domesticus</i> (Linnaeus)	58
<i>Ploceus philippinus</i> (Linnaeus)	58
<i>Lonchura malabarica</i> (Linnaeus).....	58
<i>Lonchura striata</i> (Linnaeus)	58
<i>Lonchura punctulata</i> (Linnaeus).....	59
<i>Lonchura malacca</i> (Linnaeus).....	59
DISCUSSION	59
RECOMMENDATION	60
ACKNOWLEDGEMENTS	61
REFERENCE	61

INTRODUCTION

Point Calimere Wildlife and Bird Sanctuary encompassing the great Vedaranyam Swamp extends from Point Calimere (10°18'N; 79°51'E) in the north to Adirampattinam (10°21'N; 79°25'E) in the south in Nagapattinam district, Tamil Nadu, India. The region is bounded by Salt Pans in the west and north, Bay of Bengal in the east and Palk Strait in the south. The detailed avifaunal list of this Sanctuary is not available except a few short publications (Ali 1963; Daniel 1967; Sugathan 1982; Natarajan 1992; Natarajan *et. al.* 1990; Manakadan 1993). As a part of the fauna of conservation area programme, Zoological Survey of India took up this project and conducted one field survey to this area during the period from 01.01.2005 to 14.01.2005. The present report is prepared based on actual sighting during field survey and earlier published records. For systematic account Ali and Ripley (1983) has been followed here.

STUDY AREA

The Point Calimere Wildlife and Bird Sanctuary forms the apex of cauvery delta. Only human habitations in the area are at Kodikkarai and Kodikkadu villages. Kodikkarai was connected by a branch line of Southern Railway since 1936, but the services were suspended from 1982. A motorable road connects the Sanctuary with Vedaranyam, the nearest town, situated at a distance of about 11 km. Both the railway line and the road run through the forest.

The forest of the Sanctuary is dry evergreen type and is situated on a low promontory on the coromandel coast at the meeting point of Palk Strait and Bay of Bengal. Due to interplay of high wind and fluvial processes sand dunal formations occurring in this area are unstable and dynamic in the costalfore dune area. The dunes occurring farthest from the coast are further stabilised by vegetations. A series of different types of vegetations were observed on these formations from coastal halophytic, successional scrub to highly evolved dry evergreen type which were found on the stable dune ridges. Interdunal lowlying areas form the drainage channels. The largest and deepest of these channels Peralam and Chinnanadu Pallam retain rainwater for longer periods. Muniappan Lake is a freshwater lake of the Sanctuary. Mangroove and backmangroove species of plants were found on its bank. In addition to these waterbodies most of the lowlying areas in the coastal grassland area are innundated by fresh water from upland run off during monsoon periods. The dune slacks and lowlying areas have excellent coastal meadow grasslands.

The entire swamp area is screened off from sea by a long sandbar breached at various places by inlets and outlets for water flow. Five freshwater channels empty into the swamp maintaining the freshwater content of the lagoons. The nature of the swamp habitat varies seasonally. During north east monsoon swamp remains filled with water and dries up during summer.

Many species of migratory waterbirds visit the swamps as well as coastal areas of this Sanctuary during winter. Of these the wading birds egrets and herons, belonging to the order *Ciconiiformes*, occur throughout the year. The wading birds have been proposed as indicators of the quality of the ecosystem (Custer and Osborn 1978).

HISTORICAL BACKGROUND

The actual control of the area was with the Revenue Department. It was handed over to the Forest Department in the year 1907. The forest of Point Calimere with an area of 1729 ha consisting whole of Kodikkadu Reserve Forest and Kodikkadu Extension Reserve Forest was finally notified in the year 1938 and the same was declared as Point Calimere Sanctuary in the year 1967. In the year 1988 it was proposed to include the Great Vedaranyam Swamp where the waterbirds concentrate and also the Thalainayar Reserve Forest together with its surrounding swamps with a total area of about 36000 ha within the Sanctuary and be renamed as Point Calimere wildlife and Bird Sanctuary.

CLIMATE

The climate of the area is monsoonal. But it is not typical of tropical monsoonal climates due to its asymmetrical rainfall regimes. It is characterised by a wet season of six months, followed by a dry season for rest of the months. Eventhough, some rain occurs during the southwest monsoon, the main contribution to the total rainfall is from the northeast monsoon. The northeast monsoon in the Bay of Bengal resulting in cyclonic storms which bring rains. As a result, except in February, there are rainfall in varying quantum in almost all the months of the year. The average rainfall ranges from 1000 to 1500 mm. per year.

The presence of rain practically throughout the year is a significant factor in supporting plant species in the forest habitat and finally supporting wildlife habitat.

SOIL

The soil along the shore area is silty loam and in the mud flats it is clay-silt. Towards the landward side where the freshwater channels bring in fresh silt, deposits the soil which is in a rich clay siltloose formation.

METHODOLOGY

The entire area of the sanctuary was covered on foot on a number of occasions throughout the day at different times and also in the night. Birds observed were identified with the help of 7 × 50 binocular. During night a high power head light was used to locate the nocturnal birds and to identify them. Observations were recorded as per Emlen (1971).

SYSTEMATIC ACCOUNT

Class	AVES
Order	PODICIPITIFORMES
Family	PODICIPEDIDAE

1. *Podiceps ruficollis capensis* Salvadori

Common names : Little Grebe or Dabchick (Eng.); Mukkulippan, Tanni pullu (Tamil).

Habits : Resident, shifting locally due to drought and flood. Keeps in pairs or small scattered parties. Affects mainly freshwater wetlands. Feeds on fish, frogs, tadpoles, molluscs, crustaceans and aquatic insects.

Remarks : Common. A number of birds were seen in different aquatic habitats. Breeds between December and February.

Order	PELECANIFORMES
Family	PELECANIDAE

2. *Pelecanus philippensis* Gmelin

Common names : Spottedbilled Pelican or Grey Pelican (Eng.); Kulakeda (Tamil).

Habits : Widespread resident. Keeps in flocks, in association with other waders. Affects large inland and costal waters. Feeds mainly on fishes.

Remarks : Moderately common. Only a flock of twentyeight birds was seen once in costal waterbodies. Breeds between November and March.

Family	PHALACROCORACIDAE
--------	-------------------

3. *Phalacrocorax niger* (Vieillot)

Common names : Little Cormorant (Eng.); Kadal kagam, Neer kagam (Tamil).

Habits : Resident, moving locally with conditions of water. Keeps singly or in pairs in village tanks to great flocks in tidal estuaries and larger inland waters. Feeds mainly on fish; to a lesser extent also takes tadpoles, small frogs and crustaceans.

Remarks : Common. A number of birds were seen at Muniappan Lake and other wetland and marshy areas of the sanctuary. Breeds between November and February.

4. *Anhinga rufa melanogaster* Pennant

Common names : Darter or Snake-bird (Eng.); Pambuttara (Tamil).

Habits : Resident, with local movements depending on water conditions. Occurs singly or in pairs, only rarely in small or large flocks. Frequents inland waters and feeds exclusively on fish, occasionally swallows too large ones.

Remarks : Moderately common. Only six birds could be seen in wetland areas throughout the survey period. Breeds between November and February. Population is feared to be decreasing all over the country.

Order CICONIIFORMES
Family ARDEIDAE

5. *Ardea cinerea* Linnaeus

Common names : Grey Heron (Eng.); Narai, Sambal narai (Tamil).

Habits : Resident. Keeps singly or in small parties. Largely crepuscular, hunting in early morning and at dusk. Affects jheels, marshes, rivers; also tidal creeks, estuaries, mangrove swamps and coastal backwaters. Feeds on fish, frog, molluscs, crustaceans and aquatic insects.

Remarks : Common. A number of birds were seen in different marshy areas. Breeds between November and March.

6. *Ardea purpurea* Linnaeus

Common names : Purple Heron (Eng.); Chennarai (Tamil).

Habits : Resident and local migrant. Generally solitary. Largely crepuscular, shy, feeds in dense aquatic vegetation on fish, frogs and aquatic insects during morning and evening.

Remarks : Common. A number of birds were seen in dense cover of tree tops inside Muniappan Lake. Breeds between November and March.

7. *Butorides striatus javanicus* (Horsfield)

Common names : Little Green Heron (Eng.); Dossi kokku (Tamil).

Habits : Resident. Keeps singly. Crepuscular and nocturnal, also active during daytime

in cloudy weather. Affects rivers, lakes, rice fields and marshes with dense vegetation on the banks. Feeds on fish, frogs, crabs and aquatic insects.

Remarks : Common. A number of birds were seen in different suitable habitats. Breeds between March and September.

8. *Ardeola grayii* (Sykes)

Common names : Indian Pond Heron, Paddybird (Eng.); Kulathu kokku, Kuruthu kokku, Madayan (Tamil).

Habits : Usually singly or in small parties. Feeds on frogs, fish, crustaceans, water beetles, mud skippers and other insects near water bodies and tidal swamps. Resident, shifting locally with drought and flood conditions.

Remarks : Very common. A good number of birds were seen near waterbodies. Breeds between November and February.

9. *Bubulcus ibis coromandus* (Boddaert)

Common names : Cattle Egret (Eng.); Unni kokku (Tamil).

Habits : Widespread resident. Gregarious. Keeps in small to large flocks. Usually found in association with grazing village livestock and also in inundated ploughed fields. Feeds chiefly on insects; also takes tadpoles, frogs and lizards.

Remarks : Common. A number of birds were seen in different habitats. Breeds between November and February.

10. *Ardea alba modesta* J.E. Gray

Common names : Eastern Large Egret (Eng.); Peria kokku (Tamil).

Habits : Generally solitary. Feeds communally near jheels and marshy areas on fish, frogs, crustaceans and aquatic insects. Resident, shifting locally with water conditions.

Remarks : Common. A number of birds were seen near waterbodies. Breeds between November and February.

11. *Egretta intermedia* (Wagler)

Common names : Smaller or Median Egret (Eng.), Vellai kokku (Tamil).

Habits : Resident. Found in small flocks. Feeds on fish, frogs, crustaceans and aquatic insects near jheels, marshes, inundations; also near coastal backwaters, tidal estuaries and mangrove swamps.

Remarks Common. A good number of birds were seen near waterbodies. Breeds between November and February.

12. *Egretta garzetta* (Linnaeus)

Common names : Little Egret (Eng.); Chinna kokku (Tamil).

Habits : Found in flocks. Feeds on fish, frogs, crustaceans and water insects near marshes, jheels, inundated paddyfields, etc. Resident but shifting locally with water conditions.

Remarks : Very common. A good number of birds were seen near waterbodies. Breeds between November and February.

13. *Egretta gularis schistacea* (Hemprich & Ehrenberg)

Common names : Indian Reef Heron (Eng.); Karai kokka, Karpu kallavayan (Tamil).

Habits : Resident, nomadic and local migrant. Solitary and crepuscular; sits by hunching and runs around for hunting. Affects rocky seashore, estuaries, lagoons and mangroves. Feeds on fish, molluscs and crabs.

Remarks : Common. A number of birds were seen near seashores and wetland areas of the sanctuary. Breeds between April and August.

14. *Nycticorax nycticorax* (Linnaeus)

Common names : Night Heron (Eng.); Vakka (Tamil).

Habits : Resident, patchily distributed throughout India. Gregarious, nocturnal or crepuscular except in breeding season. Roosts on dense trees during day time, often at dusk. Affects reservoirs, jheels, tanks, streams, ponds and rivers. Feeds on fish, frogs, aquatic insects and odonata larvae.

Remarks : Very common. A large flock of more than hundreds were found roosting on dense tree tops bordering a small pond near Muniappan Lake. Breeds between December and February.

15. *Ixobrychus cinnamomeus* (Gmelin)

Common names : Chestnut Bittern (Eng.); Kuruttu kokku (Tamil).

Habits Resident, nomadic, non-gregarious and crepuscular. Keeps singly or in pairs. Affects reddy beds of jheels, marshes, paddy fields and tidal mangroves. Feeds on fish, frog, molluscs and insects in large quantity.

Remarks : Uncommon : Only two birds could be seen throughout the survey period in marshy bush of Black Buck enclosure of the sanctuary. Breeds between June and September when monsoon rains have well set in.

16. *Ixobrychus flavicollis* (Latham)

Common names : Black Bittern (Eng.); Karuppu narai (Tamil).

Habits : Resident, nomadic and partly migratory. Keeps singly or in small flocks. Affects reedy swamps and ditches in forest with overgrown submerged bushes. Feeds on fishes, frogs, molluscs and aquatic insects. Crepuscular and nocturnal, active in early morning and dusk.

Remarks : Moderately common. Four birds were seen throughout the survey period in the aquatic bushes of Muniappan Lake area of the sanctuary. Breeds between June and September during SW monsoon.

Family CICONIIDAE

17. *Mycteria leucocephala* (Pennant)

Common names : Painted Stork (Eng.); Chenga narai, Sanguvalai narai (Tamil).

Habits : Resident, shifting locally with water conditions. Keeps in pairs or small parties. Feeds mainly on fish; also takes reptiles, frogs, crustaceans and insects. Affects inland marshes, jheels, inundated fields and river banks.

Remarks : Common. A number of birds were seen at Muniappan Lake and other marshy areas of the sanctuary. Breeds between November and March but variable, dependant on monsoon conditions.

18. *Anastomus oscitans* (Boddaert)

Common names : Openbill Stork (Eng.); Naththai kuththi narai (Tamil).

Habits : Resident, shifting locally with water conditions. Keeps singly or in small parties. Affects jheels, marshes, shallow wetlands, paddyfields and riverbeds. Feeds on molluscs, crabs, fishes, frogs and other small animals.

Remarks : Moderately common. Only five birds could be seen throughout the survey period in different habitats. Breeds between November and March.

19. *Ciconia episcopus* (Boddaert)

Common names : Whitenecked Stork (Eng.); Vannathi narai (Tamil).

Habits : Resident. Keeps singly, in pairs, or small parties. Affects flooded grassland, fallows, irrigated ploughed fields, rain-filled ponds, banks of streams, marshes and rivers. Feeds on frogs, reptiles, aquatic insects, molluscs and fish.

Remarks : Moderately common. Only four birds could be seen throughout the survey period near marshy areas. Breeds between December and March.

20. *Ciconia ciconia* (Linnaeus)

Common name : White Stork (Eng.).

Habits : Winter visitor. Keeps in pairs or small parties. Affects jheels, marshy areas, wet grassland and moist ploughed fields. Feeds on frogs, reptiles, crustaceans, young rodents, fish and orthopteran insects.

Remarks : Rare. Manakadan (1993) reported its occurrence in the sanctuary. We could not see any during entire survey period there. Breeds in Palaearctic north to 60°N latitude; N Africa and W Asia between March and May.

Family THRESKIORNITHIDAE

21 *Threskiornis aethiopica melanocephala* (Latham)

Common names : White Ibis (Eng.); Thalaikaththi chondan (Tamil).

Habits : Resident, nomadic. Keeps in moderate to large flocks in company with other waders. Affects river, jheels, marshes, tidal mudflats, brackish lagoons and paddy fields. Feeds on fish, frogs, molluscs and aquatic insects.

Remarks : Moderately common. Only seven birds could be seen throughout the survey period in marshy land. Breeds between November and February.

22. *Pseudibis papillosa* (Temminck)

Common names : Indian Black Ibis (Eng.); Thalaikaththi chondan (Tamil).

Habits : Resident. Gregarious, keeps in small flocks. Affects cultivated fields, margins of jheels and river banks. Feeds on frogs, fish, earthworms, aquatic insects, crustaceans, scorpions and lizards.

Remarks : Common. A number of birds were seen throughout the survey period in different habitats. Breeds between June and November.

23. *Plegadis falcinellus* (Linnaeus)

Common names : Glossy Ibis (eng.); Karappu kottan (Tamil).

Habits : Winter visitor. Gregarious nomadic and shy. Keeps in small to large flocks. Affects marshland or shallow waters. Feeds on molluscs, crustaceans and aquatic insects.

Remarks : Uncommon. Only a group of four birds were seen throughout the survey period in a marshy land. Breeds in N India between May and July.

24. *Platalea leucorodia* Linnaeus

Common names : Spoonbill (Eng.); Karandi mukh nare, Chappai chondan (Tamil).

Habits : Partly resident and nomadic, partly winter visitor. Affects marshes, jheels, rivers, tidal creeks and mangrove swamps. Keeps in small parties or flocks of fifty or more. Feeds on small fish, tadpoles, frogs, molluscs, crustaceans, aquatic insects and vegetable matters actively in mornings and evenings than during day time, and is partly nocturnal.

Remarks : Very common. A number of flocks of fifties or more were found in marshy areas of the sanctuary. Breeds between November and January.

Family PHOENICOPTERIDAE

25. *Phoenicopus roseus* Pallas

Common names : Flamingo (Eng.); Pun narai, Urian (Tamil).

Habits : Resident and locally migratory; also extralimital migrant in part. Highly gregarious, keeps in small or large flocks. Affects shallow brackish lakes, mudflats and saltpans, estuaries and freshwater jheels. Feeds on chironomid larvae, small molluscs, crustaceans and seeds of aquatic plants.

Remarks : Common. A number of flocks of several hundreds were found in the mudflats of the sanctuary. Breeds between September and April in the Great Rann of Kutch, the only known nesting ground within our country.

Order ANSERIFORMES

Family ANATIDAE

26. *Dendrocygna javanica* (Horsfield)

Common names : Lesser whistling Teal or Tree Duck (Eng.); Chilla thara (Tamil).

Habits : Resident, nomadic. Gregarious, sociable, keeps in small to large flocks. Affects freshwater wetlands. A nocturnal feeder - feeds on aquatic weeds, tender shoots, cultivated or wild gains; also takes fish, frogs, molluscs and insects.

Remarks : Common. A number of birds were seen roosting on trees near water of Muniappan Lake. Breeds between June and October.

27. *Tadorna ferruginea* (Pallas)

Common names : Ruddy Shelduck, Brahminy Duck (Eng.); Thara (Tamil).

Habits : Winter visitor. Keeps in pairs and small parties. Affects open lakes, riverbanks and mudspits. Feeds on grains, tender shoots and tubers, crustaceans, molluscs and aquatic insects.

Remarks : Uncommon. Only a pair was seen throughout the survey period in 'Muniappan Lake' area. Breeds between May and June from Morocco to C Siberia and N Japan. Within Indian limit breeds in Ladakh above 4000 m.

28. *Anas acuta* (Linnaeus)

Common names : Pintail (Eng.); Markalian (Tamil).

Habits : Common winter visitor. Keeps in large flocks near lakes, marshes, reedy and vegetation covered jheels, wet paddy fields and rivers. Largely a crepuscular and nocturnal feeder and roosts during day. Feeds on grass, corns, shoots, seeds of aquatic plants and other vegetative matters. Also takes to a lesser extent molluscs, worms, aquatic insects and their larvae.

Remarks : Very common. A number of flocks of several hundreds were seen in different wetlands of the sanctuary. Breeds in northern parts of Europe, Asia and N America.

29. *Anas crecca* Linnaeus

Common names : Common Teal (Eng.); Siravi, Kilawai (Tamil).

Habits : Winter visitor. Keeps in small to large flocks. Affects freshwater tanks, jheels, marshes, pools, reservoirs, lakes and rivers. Feeds on vegetable shoots, tubers, aquatic plants, and grains of wild and cultivated crops.

Remarks : Moderately common. A group of eight birds was only seen once throughout the survey period in Muniappan Lake area. Breeds in Europe and N and NE Asia.

30. *Anas poecilorhyncha* J.R. Forster

Common name : Spotbill Duck (Eng.).

Habits : Resident nomadic, and occasionally migratory. Usually seen in pairs, family

parties, or small flocks. Affects freshwater vegetation covered jheels, lakes, marshes, reservoirs, tanks and rarely on rivers. Feeds mainly on vegetative matters - aquatic plants, their seeds and arable crops; occasionally also takes aquatic insects, their larvae, worms and molluscs.

Remarks : Common. A good number of birds were seen in freshwater wetlands of the sanctuary. Breeds between November and December depending largely on water conditions.

31 *Anas penelope* Linnaeus

Common name : Wigeon (Eng.).

Habits : Winter visitor. Gregarious, keeps in flocks. Affects shallow reedy jheels and marshes. Feeds on vegetable matters; also takes aquatic insects and their larvae, and molluscs.

Remarks : Uncommon. Only six birds could be seen throughout the survey period in marshy land. Breeds in Eurasia in temperate region north to Arctic Circle and beyond.

32. *Anas querquedula* Linnaeus

Common name : Garganey or Bluewinged Teal (Eng.).

Habits : Winter visitor. Gregarious, keeps in flocks. Affects every type of water bodies jheels, marshes, village tanks, costal backwaters, laggons and paddy fields. Feeds on seeds, arable crops; also aquatic insect larvae, worms and molluscs.

Remarks : Uncommon. Only one flock of six birds could be seen throughout the survey period in marshy areas. Breeds across Palaearctic from Britain to Pacific.

33. *Anas clypeata* Linnaeus

Common names : Shoveller (Eng.). Mattimukh cherevi, Thara (Tamil).

Habits : Winter visitor. Usually keeps in small parties in association with other teals. Affects all types of shallow freshwaters. Feeds on molluscs, crustaceans, insect larvae, worms and aquatic plants.

Remarks : Moderately common. About twenty birds were seen in different freshwater bodies throughout the survey period. Breeds in Europe, N Asia and N America.

34. *Aythya ferina* (Linnaeus)

Common names : Common Pochard (Eng.); Sengalian (Tamil).

Habits : Winter visitor. Keeps in loose flocks. Affects open jheels, lakes and submerged aquatic vegetation. Feeds on aquatic plants, algae, seeds; occasionally molluscs, insect larvae, fish and tadpoles.

Remarks : Uncommon. Only a group of six birds were seen once throughout the survey period in Muniappan Lake. Breeds in W Europe to E Siberia.

Order FALCONIFORMES
Family ACCIPITRIDAE

35. *Milvus migrans govinda* Sykes

Common names : Pariah Kite (Eng.); Paria parundu, Kalu parundu (Tamil).

Habits : Found singly or in pairs. Largely omnivorous. An efficient scavenger, haunting the precincts of slaughter houses, fish markets, refuse dumps, markets and harbours. Resident with local migration from heavy rainfall localities to drier areas.

Remarks : Common. A number of birds were seen near human habitations. Breeds between September and April.

36. *Haliastur indus* (Boddaert)

Common names : Brahminy Kite (Eng.); Sem parundu, Krishna Parundu (Tamil).

Habits : Live in pairs. Feeds on fish, frogs, crabs, lizards, small snakes, insects, small birds, etc. near tidal creeks, fishing villages, docks, reservoirs, rivers, jheels, inundated rice-fields and flooded areas. Resident, with some local movements governed by monsoon and water conditions.

Remarks : Common. A number of birds were seen nesting on tree tops. Breeds between December and March.

37. *Accipiter badius* (Gmelin)

Common name : Indian Shikra (Eng.).

Habits : Resident. Keeps singly or in pairs. Affects open wooded biotope, hill and plain and the environs of villages and cultivations. Feeds on small mammal and bird, lizard, frog, locusts, and insects.

Remarks : Uncommon. Only two birds were seen flying up in the air. Breeds between April and May.

38. *Accipiter nisus* (Linnaeus)

Common name : Asiatic Sparrow-Hawk (Eng.).

Habits : Sparse winter visitor. Usually solitary. Affects well wooded, broken and foot hills country, light forests, groves and orchards. Feeds mainly on birds and other animals about its own size and weight.

Remarks : Uncommon. A single bird was seen feeding on a House sparrow. Breeds in Kashmir Himalayas.

39. *Hieraetus pennatus* (Gmelin)

Common names : Booted Hawk-Eagle (Eng.); Punja parandu, Rasali, Kalugu (Tamil).

Habits : Winter visitor. Keeps in pairs. Affects well-wooded country; also groves and trees around habitations and cultivation. Feeds on small mammals, birds and reptiles.

Remarks : Moderately common. Only four birds could be seen throughout the survey period in forest trees. Breeds in Baluchistan and Himalayas between March and June.

40. *Aquila rapax* (Temminck)

Common name : Eastern Steppe Eagle (Eng.); Ali (Tamil)..

Habits : Winter visitor. Keeps singly. Affects open treeless country, chiefly plains and plateaux. Feeds on rodents, reptiles, ground birds and carrions.

Remarks : Rare. Natarajan *et. al.* (1990) observed a single specimen near old Forest Rest House. We could not observe any during survey trips there. Breeds in Altai to Mongolia and SE Siberia.

41. *Circus aeruginosus* (Linnaeus)

Common names : Marsh Harrier (Eng.); Poonai parundu (Tamil).

Habits : Winter visitor. Keeps singly. Affects marshland, jheels and flooded paddyfields. Feeds on fish, frogs, mice, voles, small birds and large insects.

Remarks : Uncommon. Only two birds could be seen throughout the survey period in marshy areas. Breeds in S Sweden and Denmark during April to June.

42. *Spilornis cheela* (Latham)

Common names : Crested Serpent Eagle (Eng.); Kudumiyan (Tamil).

Habits Resident, subject to local migration. Keeps singly or in pairs. Affects wooded streams, edge of forest, cultivation and jungle-clad ravines. Feeds on snakes, frogs, lizards, rats, mice, small birds, crabs and fishes.

Remarks : Uncommon. Only a pair of birds could be seen throughout the survey period in forested areas of the sanctuary. Breeds between December and March.

Family FALCONIDAE

43. *Falco biarmicus* Temminck

Common name : Laggar Falcon (Eng.).

Habits : Resident. Keeps in separated pairs. Affects open scrub country, neighbourhood of cultivation and habitations. Feeds on rats, bats, lizards and small birds.

Remarks : Uncommon. Only three birds could be seen throughout the survey period perched on tree-tops near cultivated land of the sanctuary area. Breeds between January and April.

44. *Falco peregrinus* Tunstall

Common names : Shaheen Falcon (Eng.); Valluru (Tamil).

Habits : Resident. Keeps singly or in pairs. Affects the neighbourhood of jungles, rivers, jheels, costal marshes and lagoons. Feeds mainly on birds - hunting after dawn and again in late afternoon and dusk.

Remarks : Moderately common. Only four birds could be seen throughout the survey period perching on tree tops near marshes. Breeds between January and April.

Order GALLIFORMES

Family PHASIANIDAE

45. *Francolinus pondicerianus* (Gmelin)

Common names : Grey Partridge (Eng.); Kondari, Kauthari (Tamil).

Habits : Resident. Keeps in pairs or small family parties. Affects scrub and grassland near villages and cultivation, also forest bushes. Feeds on seeds, grains, grass shoots, crop plants, berries and insects.

Remarks : Moderately common. Only five birds could be seen throughout the survey period in forest bushes. Breeds between April and September.

46. *Coturnix coromandelica* (Gmelin)

Common names : Blackbreasted or Rain Quail (Eng.); Kadai (Tamil).

Habits : Resident, nomadic or locally migratory. Keeps singly or in scattered pairs. Affects grassland, scrub jungle, standing crops and paddyfields. Feeds on paddy, millets, grains, seeds and insects.

Remarks : Uncommon. Only a pair was seen throughout the survey period near 'Ramrapadam' Breeds between March and October.

47. *Perdicula asiatica* (Latham)

Common names : Jungle Bush Quail (Eng.); Kadai (Tamil).

Habits : Resident. Keeps in small parties. Affects grass-and-scrub jungle and dry deciduous forest. Feeds on vegetative matters and small insects.

Remarks : Uncommon. Only two birds could be seen throughout the survey period in forest bushes. Breeds between February and April.

48. *Galloperdix spadicea* (Gmelin)

Common names : Red spurfowl (Eng.); Sarawa kozhi (Tamil).

Habits : Resident. Keeps in pairs or small parties. Affects scrubby jungle near watercourses and moist-deciduous biotope. Feeds on vegetative matters, small molluscs and insects.

Remarks : Uncommon. Only a pair could be seen throughout the survey period in bushes of Muniappan Lake. Breeds between January and June.

49. *Pavo cristatus* Linnaeus

Common names : Indian Peafowl (Eng.); Mayil (Tamil).

Habits : Resident. Keeps in small flocks consisting usually of a cock and 3 to 5 hens. Affects forest undergrowth in wild; villages and cultivation where semiferal. Feeds on vegetative matters, centipeds, scorpions, lizards, small snakes and insects.

Remarks : Common. A number of birds were seen in different areas. Breeds between April and May.

Order GRUIFORMES
Family TURNICIDAE

50. *Turnix tanki* Blyth

Common name : Yellowlegged Button Quail (Eng.).

Habits : Resident. Keeps singly or in pairs. Affects scrub and grassland, and crops. Feeds on vegetative matters and insects.

Remarks : Moderately common. Only three birds could be seen throughout the survey period. Breeds between July and September.

51. *Turnix suscitator* (Gemelin)

Common names : Bustard-Quail (Eng.); Kurung kadik, Ankadik (Tamil).

Habits : Resident, nomadic. Keeps singly or in pairs. Affects grassland and scrub jungle, light deciduous forest. Feeds on vegetative matters and small insects.

Remarks : Uncommon. Only a single bird could be seen throughout the survey period in Black Buck enclosure. Breeds between June and October.

Family RALLIDAE

52. *Prozana fusca* (Linnaeus)

Common names : Ruddy Crane (Eng.); Kanan kozli (Tamil).

Habits : Resident with partial migration during winter. Keeps in pairs. Affects reeds and bushes on the edge of flooded fields, swamps and jheels; also canal banks and marshes. Feeds on aquatic insects and their larvae, molluscs, seeds and shoots of marsh plants.

Remarks : Moderately common. Only six birds could be seen throughout the survey period in different marshy areas. Breeds between June and September.

53. *Amourornis phoenicurus* (Pennant)

Common names : Whitebreasted Waterhen (Eng.); Kanan kozhi (Tamil).

Habits : Resident. Affects reedy marshland, rain-filled ponds, roadside ditches, village tanks, edges of inundated rice-fields and their neighbourhood. Keeps singly or in pairs, less shy and secretive. Feeds on insects and their larvae, molluscs, worms, seeds and shoots of marsh plant.

Remarks : Common. A number of birds were seen in the wetland bushes of the sanctuary and also even found running to cross the other side of the forest. Breeds between July to October but is mainly coincident with the SW monsoon.

54. *Gallinula chloropus* (Linnaeus)

Common names : Indian Moorhen (Eng.); Tannir kozhi, Kanan koli (Tamil).

Habits : Resident and partly winter visitor. Keeps in pairs or small parties. Affects jheels, swamps, marshes, lakes, ponds, village tanks and ditches. Feeds on aquatic plants, molluscs, insects, small fish and forgs.

Remarks : Moderately common. Only six birds could be seen throughout the survey period in Muniappan Lake area. Breeds between July and September during monsoon months.

55. *Porphyrio porphyrio* Linnaeus

Common names : Indian Purple Moorhen (Eng.).

Habits : Resident and local migrant. Keeps in parties. Affects large marshes and reed beds around jheels. Feeds on seeds, grains, tiny molluscs and insects.

Remarks : Moderately common. Only five birds could be seen throughout the survey period in a marshy area inside the 'Black Buck' enclosure. Breeds between November and January.

Order CHARADRIIFORMES
Family JACANIDAE

56. *Hydrophasianus chirurgus* (Scopoli)

Common names : Pheasant-tailed Jacana (Eng.); Manal pura, Miwa (Tamil).

Habits : Resident. Keeps in small flocks. Affects fresh water wetlands, village tanks and jheels. Feeds on aquatic insects and their larvae; also takes molluscs and aquatic insects.

Remarks : Moderately common. Six birds could be seen throughout the survey period in different waterbodies. Breeds between March and July.

57. *Metopidius indicus* (Latham)

Common names : Bronzewinged Jacana (Eng.).

Habits : Widespread resident. Keeps in small flocks. Affects freshwater wetlands, village tanks and jheels. Feeds on vegetative matters, molluscs and insects.

Remarks : Moderately common. Only four birds could be seen throughout the survey period in different waterbodies. Breeds between June and September.

Family CHARADRIIDAE
Subfamily CHARADRIINAE

58. *Vanellus indicus* (Boddaert)

Common names : Redwattled Lapwing (Eng.); Alkatti (Tamil).

Habits : Resident. Keeps in pairs or small loose flocks. Affects neighbourhood of water in open country and cultivation. Feeds on insects, caterpillars, tiny molluscs and vegetable matter.

Remarks : Common. A number of birds were seen in different areas of the sanctuary. Breeds between April and August.

59. *Vanellus malabaricus* (Boddaert)

Common names : Yellow-wattled Lapwing (Eng.); Alkatti (Tamil).

Habits : Resident and nomadic. Keeps in pairs or small parties. Affects barren wasteland, stubbles and fallow fields in drier biotope. Much less dependent on proximity of water. Feeds chiefly on insects.

Remarks : Common. Found throughout the sanctuary in suitable habitats. Breeds between March and July.

60. *Pluvialis squatarola* (Linnaeus)

Common names : Blackbellied or Grey Plover (Eng.); Kottan (Tamil).

Habits : Winter visitor. Gregarious, keeps in pairs or parties. Affects sandy seashore, tidal mudflats, estuaries and creeks. Feeds on insects, molluscs, crustaceans and worms; rarely takes marsh plants and seeds.

Remarks : Moderately common. Only a group of six birds were seen throughout the survey period in mudflats. Breeds in Arctic tundra of Europe and Asia between June and July.

61. *Pluvialis dominica fulva* (Gmelin)

Common names : Eastern Golden Plover (Eng.); Kottan (Tamil).

Habits : Winter visitor. Gregarious, keeps in flocks. Affects tidal mudflats, costal lagoons, edges of lakes, grassland near the coast and ploughed wet fields. Feeds on insects, worms, crustaceans and molluscs.

Remarks : Common. A number of birds were seen in the marshy areas of the sanctuary. Breeds in N siberia and W. Alaska.

62. *Charadrius leschenaultii* Lesson

Common name : Large Sand Plover (Eng.).

Habits : Winter visitor. Keeps in scattered parties in association with other waders. Affects costal mudflats and seashores. Feeds on insects, worms and small crabs.

Remarks : Moderately common. Only six birds could be seen throughout the survey period in mudflats. Breeds in C Asia from Iran to Japan.

63. *Charadrius asiaticus* Pallas

Common names : Caspian Sand Plover (Eng.).

Habits : Winter visitor. Keeps singly or in pairs. Affects sea coast and mudflats, but prefer grassy inland plains. Feeds on small crabs, marine worms and insects.

Remarks : Rare. Only a pair could be seen throughout the survey period near edge of water of the southern boundary of the sanctuary. Breeds in SE Russia to E Iran.

64. *Charadrius dubius* Scopoli

Common names : Little Ringed Plover (Eng.); Sinna kottan (Tamil).

Habits : Resident. Keeps in pairs or small flocks. Affects tidal mudflats, estuaries, seashore, riverbanks and paddy fields. Feeds on insects, worms and tiny crabs.

Remarks : Common. A number of birds were seen in different marshy area of the sanctuary. Breeds between March and May.

65. *Charadrius alexandrinus* Linnaeus

Common names : Kentish Plover (Eng.); Sinna kottan (Tamil).

Habits : Winter visitor. Keeps in parties or flocks, mixed with other waders. Affects the seacoast, riverbanks and mudflats. Feeds on insect and small crabs.

Remarks : Common. A number of birds were found feeding with other waders in the marshy areas. Breeds between April and July in N India and Pakistan.

66. *Charadrius mongolus* Pallas

Common names : Lesser Sand Plover (Eng.); Kottan (Tamil).

Habits : Winter visitor. Gregarious, keeps in scattered flocks in association with other waders. Affects mudflats, sand banks and seashores. Feeds on worms, small crabs and insects.

Remarks : Common. A number of birds were seen in different suitable habitats. Breeds in Ladakh, Kashmir, Tibet and NW China between June and July.

Subfamily SCOLOPACINAE

67. *Numenius phaeopus* (Linnaeus)

Common names : Whimbrel (Eng.); Kuthirai malai kottan (Tamil).

Habits : Winter visitor. Keeps singly or in small parties. Affects sea coasts, tidal mangroves, creeks, mudflats and jheels. Feeds on molluscs and crustaceans.

Remarks : Moderately common. Only seven birds could be seen throughout the survey period in different mudflats. Breeds in N Europe to western Siberia during May and June.

68. *Numenius arquata* (Linnaeus)

Common names : Curlew (Eng.); Kuthirai mallai kottan, Khudure kottan (Tamil).

Habits : Winter visitor. Keeps singly or in small groups in association with other waders. Affects tidal mudflats, sandy seashores, mangrove swamps, harbours, creeks and estuaries. Feeds on molluscs, crustaceans, mudskippers and insects.

Remarks : Uncommon. Only five birds could be seen throughout the survey period in the seashores of the sanctuary. Breeds in the Palaearctic region upto western Siberia.

69. *Limosa limosa* (Linnaeus)

Common name : Blacktailed Godwit (Eng.).

Habits : Winter visitor. Keeps singly or in small groups. Affects both freshwater and brackish habitats. Feeds on molluscs, crustaceans, worms and grass seeds.

Remarks : Moderately common. Four birds could be seen throughout the survey period in different habitats. Breeds in N and C Europe and W Asia between May and June.

70. *Tringa totanus* (Linnaeus)

Common names : Common Redshank (Eng.); Mali kottan, Segappu kal ullan (Tamil).

Habits : Winter visitor. Keeps solitary, in small parties or large flocks, often in association with other waders. Affects river banks, jheel margins, tidal creeks, salt pans and estuaries on the sea board. Feeds on molluscs, crustaceans, worms, aquatic insects and their larvae.

Remarks : Common. Found throughout the sanctuary near waterbodies and salt pans. Breeds in the Tibetan Platean of Ladakh and Kashmir between May and July.

71. *Tringa stagnitilis* (Bechstein)

Common names : Marsh Sandpiper, Little Greenshank (Eng.).

Habits : Winter visitor. Keeps in parties or small flocks in company with other sandpipers. Affects swampy edges of freshwater ponds and jheels, inundated paddyfields; also to a lesser extend at brackish lagoons and tidal mudflats. Feeds on small molluscs, crustaceans, worms and insects.

Remarks : Common. Found throughout the marshy land of the sanctuary. Breeds in Tibetan Platean of Ladakh and Kashmir area.

72. *Tringa nebularia* (Gunnerus)

Common names : Greenshank (Eng.); Peria kottan (Tamil).

Habits : Winter visitor. Keeps singly or in small parties but rarely in flocks. Affects riverbanks, marshes, puddles, tanks and jheels, tidal creeks, costal lagoons and salt pans. Feeds on tadpoles, molluscs, crustaceans, worms and insects.

Remarks : Moderately common. Found in less number than Redshank throughout the marshy areas of the sanctuary. Breeds in N Europe and across N Asia.

73. *Tringa ochropus* Linnaeus

Common name : Green Sandpiper (Eng.).

Habits : Winter visitor. Keeps singly or in pairs. Affects jheels, village tanks, puddles, paddy fields; also tidal creeks, lagoons and salt pans. Feeds on molluscs, crustaceans, worms and aquatic insects.

Remarks : Moderately common. Only eight birds were seen throughout the survey period in salt pans of the sanctuary. Breeds in N Europe and Asia.

74. *Tringa glareola* Linnaeus

Common names : Wood or Spotted Sandpiper (Eng.); Kottan, Vaya ullan (Tamil).

Habits : Winter visitor. Keeps in small to large flocks. Affects jheels, wet paddyfields, marshes; also tidal creeks and mudflats on seaboard. Feeds on small fish, tiny molluscs, crustaceans, worms and insects.

Remarks : Moderately common. Found in small flocks in the mudflats of the sanctuary. Breeds in Europe and N Asia.

75. *Tringa terek* (Latham)

Common names : Terek Sandpiper or Avocet-Sandpiper (Eng.).

Habits : Winter visitor. Keeps in small flocks. Affects seashore, coastal lagoons, mangrove swamps, tidal creeks and mudflats. Feeds on small molluscs, crustaceans and aquatic insects.

Remarks : Rare. Natarajan (1992) reported its occurrence in the sanctuary. We could not observe any during our survey period there. Breeds in N Russia to Siberia between May and June.

76. *Tringa hypoleucos* Linnaeus

Common names : Common Sandpiper (Eng.); Kottan (Tamil).

Habits : Winter visitor. Keeps singly or in loose groups of 2-3. Affects inland water tanks, streams, ditches, paddy fields; also seashore, tidal mudflats and estuaries. Feeds on small molluscs, crustaceans and aquatic insects.

Remarks : Common. A number of birds were seen in different marshy land of the sanctuary. Breeds in Kashmir, Ladakh and Garhwal within Indian limits; all over Europe and Asia south of Tundra.

77. *Arenaria interpres* (Linnaeus)

Common names : Turnstone (Eng.); Kottan (Tamil).

Habits : Winter visitor. Keeps in small flocks in company with other waders. Affects seacoasts and mudflats. Feeds on small molluscs, crustaceans, worms and insects.

Remarks : Uncommon. Only twelve birds in two flocks were seen in the mudflats throughout the survey period. Breeds in Arctic coasts and Tundra.

78. *Gallinago stenura* Bonaparte

Common names : Pintail Snipe (Eng.); Ullan kuruvi, Mor ullan (Tamil).

Habits : Winter visitor. Keeps singly or in small groups. Affects costal and inland marshes, edges of backwaters, wet paddy fields and often on drier grounds. Generally crepuscular and nocturnal. Feeds on worms and tiny molluscs.

Remarks : Uncommon. Only three birds could be seen throughout the survey period in the wetlands of the sanctuary. Breeds in E. Siberia and N Tibet.

79. *Gallinago gallinago* (Linnaeus)

Common names : Common or Fantail Snipe (Eng.); Mor ullan, Ullan kuruvi, Korra kuthi (Tamil).

Habits : Winter visitor. Keeps singly or in small groups. Affects edges of jheels, marshes and harvested paddyfields. Feeds chiefly on worms, larvae and tiny molluscs.

Remarks : Uncommon. Only four birds could be seen throughout the survey period in Muniappan Lake of the sanctuary. Breeds in Himalayas during April and June.

80. *Gallinago minima* (Brunnich)

Common names : Jack Snipe (Eng.); Ullan (Tamil).

Habits : Winter visitor. Keeps singly. Affects water logged paddyfields and swampy edge of backwaters. Feeds on worms, molluscs and insects.

Remarks : Uncommn. Only five birds could be seen throughout the survey period in Muniappan Lake of the sanctuary. Breeds in N Europe and N Asia.

81. *Calidris alba* (Pallas)

Common name : Sanderling (Eng.).

Habits : Winter visitor. Keeps in small parties with other waders. Affects sandy seashore and tidal mudflats. Feeds on molluscs, small crustaceans and other small animals.

Remarks : Moderately common. Eight birds in two flocks were seen throughout the survey period in mudflats. Breeds in Arctic tundra.

82. *Calidris minuta* (Leister)

Common names : Little Stint (Eng.); Kosu ullan (Tamil).

Habits : Winter visitor. Keeps in large flocks. Affects marshy estuaries, costal lagoons, tidal creeks, mudflats, paddy fields and edge of backwaters. Feeds on small molluscs, crustaceans, insects and worms.

Remarks : Common. A number of flocks were seen in different marshy areas of the sanctuary. Breeds in N Europe to Central Siberia.

83. *Calidris temminckii* (Leisler)

Common names : Temminck's Stint (Eng.); Kosu ullan (Tamil).

Habits : Winter visitor. Keeps singly or in loose small flocks. Affects tidal mudflats, costal lagoons; inland freshwater marshes and river banks. Feeds on small molluscs, crustaceans and insects.

Remarks : Uncommon. Only ten birds in two flocks were seen in the marshy areas throughout the survey period. Breeds in N Europe and NW Asia.

84. *Calidris subminuta* (Midendorff)

Common names : Longtoed Stint (Eng.).

Habits : Winter visitor. Keeps in pairs or small parties in mixed flocks with other stints. Affects coastal wetlands, tidal mudflats and freshwater. Feeds on small molluscs, crustaceans and insects.

Remarks : Uncommon. Only two birds were seen throughout the survey period while feeding in association with other waders in Muniappan Lake. Breeds in E Siberia south to Kamchatka.

85. *Calidris alpina* (Linnaeus)

Common name : Dunlin (Eng.).

Habits : Winter visitor. Keeps in flocks in association with other waders. Affects seashore, estuaries, tidal mudflats, riverbanks and paddyfields. Feeds on molluscs, worms and small crustaceans.

Remarks : Moderately common. Only a flock of six birds could be seen throughout the survey period feeding in the mudflats in association with other waders. Breeds in N Europe and N Asia during June - July.

86. *Calidris testacea* (Pallas)

Common names : Curlew Sandpiper (Eng.); Mookar ullan (Tamil).

Habits : Winter visitor. Keeps in flocks, often mixed with other waders. Affects seashore, tidal mudflats, creeks, salt pans, squelchy paddy fields and marshes. Feeds on molluscs, crustaceans, worms, chironomid larvae, insects; occasionally takes seed.

Remarks : Common. A number of birds were seen in different marshy area of the sanctuary. Breeds in N Asia upto N Siberia.

91. *Eurynorhynchus pygmaeus* (Linnaeus)

Common names : Spoonbilled Sandpiper (Eng.).

Habits : Winter visitor. Keeps singly or small flocks in association with other small waders. Affects muddy coasts and costal lagoons. Feeds on insects and minute crabs.

Remarks : Uncommon. Only four birds could be seen moving alongwith a large flock of Little Stint in a mudflat of the Black Buck enclosure of the sanctuary. Breeds in coasts on NE Siberia. A globally threatened species.

92. *Limicola falcinellus* (Pontoppidan)

Common names : Broadbilled Sandpiper (Eng.); Ullan (Tamil).

Habits : Keeps in flocks in association with other water birds. Affects the costal area, tidal mudflats, muddy creeks and brackish lagoons, and sand banks of large rivers. Feeds on molluscs, worms, tiny gastropods, insects; also small quantity of seeds. A winter visitor to India.

Remarks : Common. More than hundred bird were seen in two flocks near mudflats. Breeds in N Europe and western Siberia.

93. *Philomachus pugnax* (Linnaeus)

Common name : Ruff (Eng.).

Habits : Winter visitor. Gregarious, keeps in small groups in company with other waders. Affects tidal mudflats, pools, marshes, freshwater lakes and flooded paddy fields. Feeds on molluscs, crustaceans, insects and aquatic plants.

Remarks : Uncommon. Only four birds could be seen in Muniappan Lake throughout the survey period. Breeds across Palaearctic from N Europe, N. Africa to Tundra in the east.

Subfamily PHALAROPINAE

94. *Phalaropus lobatus* (Linnaeus)

Common name : Rednecked Phalarope (Eng.).

Habits : Winter visitor. Keeps in small flocks. Affects freshwater lakes and shallow pools. Feeds on small crustaceans, worms, molluscs, insects and larvae.

Remarks : Rare. Natarajan (1992) reported its occurrence in the sanctuary. We could not observe any bird during our survey period there. Breeds circumpolar in Arctic zone.

Family ROSTRATULIDAE

95. *Rostratula benghalensis* (Linnaeus)

Common names : Painted Snipe (Eng.); Myle ulan, Ullan kuruvi (Tamil).

Habits : Resident. Keeps singly or in small groups of 2-3. Affects reedy marshes and paddy fields. Feeds on insects, worms, crustaceans, molluscs and vegetable matters.

Remarks : Common. A number of birds were seen in different habitats of the sanctuary. Breeds mainly between December and February.

Family RECURVIROSTRIDAE

96. *Himantopus himantopus* (Linnaeus)

Common names : Blackwinged Stilt (Eng.); Paville kal ullan (Tamil).

Habits : Widespread resident, subject to local movements; partly winter visitor. Gregarious, keeps in small parties with other waders. Affects freshwater and brackish water marshes, jheels, village tanks, lagoons and salt-pans. Feeds on molluscs, worms, aquatic insects; also takes seeds of aquatic vegetation.

Remarks : Common. A number of birds were seen in different aquatic habitats. Breeds between April and August.

97. *Recurvirostra avocetta* Linnaeus

Common names : Avocet (Eng.); Kuni arichichan (Tamil).

Habits : Winter visitor. Keeps in pairs or small parties. Affects tidal creeks, mudflats, marshes, lagoons and sea shores. Feeds on tiny molluscs, crustaceans and insects.

Remarks : Uncommon. Only three birds could be seen throughout the survey period in the mudflats of the sanctuary. Breeds in Europe, S and E Africa.

Family DROMADIDAE

98. *Dromas ardeola* Paykull

Common name : Crab Plover (Eng.).

Habits : Winter visitor. Keeps singly, in pairs or small parties. Affects tidal mudflats, lagoons, estuaries and seashore. Usually crepuscular, feeds chiefly on crabs; also crustaceans and other small aquatic animals.

Remarks : Uncommon. Only two birds could be seen throughout the survey period near sea shore area of the sanctuary. Breeds in Persian Gulf Islands during May and June.

Family BURHINIDAE

99. *Burhinus oedicephalus* (Linnaeus)

Common names : Stone Curlew (Eng.); Musal kinandi (Tamil).

Habits : Resident, with some local movements. Keeps in pairs or small parties. Affects open scrub and light forest in the neighbourhood of cultivation, orchards and groves around villages. Terrestrial, cursorial, crepuscular and nocturnal. Feeds on insects, worms, slugs and small reptiles.

Remarks : Uncommon. Only four birds could be seen throughout the survey period in forest bushes of the sanctuary. Breeds between March and July.

100. *Esacus maganirostris recurvirostris* (Cuvier)

Common name : Great Stone Plover (Eng.).

Habits : Resident with some local migratory movements. Keeps in pairs or small loose parties. Affects stony bed of rivers, tidal estuaries, salt pans and occasionally sea beaches. Feeds on crabs, molluscs, insects, frogs and other small animals. Crepuscular and nocturnal but prefers sunlight during day.

Remarks : Uncommon. Only a flock of four birds could be seen throughout the survey period in sea shore area. Breeds between February and June.

Family GLAREOLIDAE

101 *Glareola pratincola* (Linnaeus)

Common names : Collared Pratincole or Swallow-Plover (Eng.).

Habits : Winter visitor. Keeps in flocks. Affects barren river, flood plains, tidal creeks and grazing land around jheels. Feeds on flying insects, beetles and termites.

Remarks : Moderately common. Only a flock of six birds was seen throughout the survey period near a tidal creek. Breeds in Mediterranean, Black Sea, Middle east upto W Pakistan during March to May.

102. *Glareola lactea* Temminck

Common names : Small Indian Pratincole or Swallow-Plover (Eng.).

Habits : Resident. Keeps in large flocks. Affects rivers with sand banks and coastal marshes. Crepuscular, feeds on insects till it is quite dark.

Remarks : Common. A number of flocks were seen in different suitable habitats. Breeds between March and May.

Family LARIDAE

103. *Larus argentatus* Pontopiddan

Common name : Herring Gull (Eng.).

Habits : Winter visitor. Keeps in small flocks. Affects seacoast, harbours and also inland lakes and rivers. Feeds on fish waste, molluscs, crabs, insects; also steals eggs and chicks of terns.

Remarks : Rare. Natarajan (1992) reported occurrence of this bird in the sanctuary. We could not see any during the survey period there. Breeds in northern Siberia.

104. *Larus fuscus* Linnaeus

Common name : Lesser Blackbacked Gull (Eng.).

Habits : Winter visitor. Keeps singly or in small flocks. Affects seashore, fishing centres, costal villages and coastal mudflats. Feeds on fish, crabs, marine molluscs and worms.

Remarks : Common. A good number of birds were seen in costal and costal mudflat area of the sanctuary. Breeds outside India, from N, Scandinavia, eastward to Murman coast and south to the Gulf of Bothria and Finland.

105. *Larus brunnicephalus* Jerdon

Common names : Brownheaded Gull (Eng.); Kadal kakkai (Tamil).

Habits : Winter visitor. Keeps in small parties. Gregarious, scavenger. Affects fishing villages, seashores, costal lagoons, tidal creeks and estuaries. Feeds on fish, prawns, insects, worms, slugs and also shoots of various crops.

Remarks : Common. A number of birds were seen near seashores and other mudflats throughout the survey period. Breeds in Ladakh and in high plateaus of C Asia upto Mongolia during June and July.

106. *Larus rudibundus* Linnaeus

Common names : Blackheaded Gull (Eng.); Kadal kakkai (Tamil).

Habits : Winter visitor. Keeps in small parties. Gregarious, often found in company of Brown-headed Gull. Affects seacoast, harbours, estuaries, lakes and rivers. Feeds on fish, prawn, insect, slugs and earthworms.

Remarks : Common. A number of birds were seen near seaboard and mudflats. Breeds in Europe, W and C Asia upto S Mongolia during June and July.

107. *Chlidonias hybridus* (Pallas)

Common names : Whiskered Tern (Eng.); Kadal kuruvi (Tamil).

Habits : Winter visitor. Keeps singly or in small flocks. Affects backwater, jheels, rivers, marshes and flooded paddyfields, costal lagoons, tidal mudflats and estuaries. Feeds on insect and their larvae, crab, fish and tadpoles.

Remarks : Common. A good number of birds were seen in different habitats of the sanctuary. Breeds in Kashmir and northern India during June to August.

108. *Sterna aurantia* J.E. Gray

Common names : Indian River Tern (Eng.); Kadal Kuruvi (Tamil).

Habits : Resident. Generally solitary, also found in twos and threes. Found flying in flocks up and down over rivers and lakes. Feeds mainly on fish, crustaceans and aquatic insects. Rests and roost at night on sandbanks.

Remarks : Common. Found in the salt ponds, adjoining swamps, Maniappan Lake and monsoonal pools inside the forests. Breeds between March and May.

109. *Sterna hirundo* Linnaeus

Common names : Common Tern (Eng.); Kadal Kuruvi (Tamil).

Habits : Generally solitary, sometimes in colonies. Affects large rivers, jheels and lakes. Hunts by plunging. Feeds mainly on fish; also takes molluscs, crustaceans and aquatic insects. Rest on estuarine mudflats and sandbars in association with other tern and gulls.

Remarks : Common, a number of birds were seen. A winter visitor to the coasts of India. Breeds in Palaearctic Europe and Asia.

110. *Sterna acuticauda* J.E. Gray

Common names : Blackbellied Tern (Eng.); Kadal kuruvi (Tamil).

Habits : Widespread resident. Keeps in small to large flocks. Affects large rivers and freshwater jheels; not found on the sea coast. Feeds mainly on fish; also takes insects and crustaceans.

Remarks : Moderately common. Only twelve birds in two flocks could be seen in Muniappan Lake area. Breeds between March and May.

111. *Sterna anaethetus* Scopoli

Common names : Brownwinged Tern (Eng.); Kadal kuruvi (Tamil).

Habits : Winter visitor. Keeps singly or in pairs. Affects offshore wetland areas. Feeds mainly on fish.

Remarks : Rare. Natarajan *et. al.* (1990) obtained a single dead specimen and recorded its occurrence in the sanctuary. We could not see any during our survey trips there. Breeds off Maharashtra coast, Lakshadweep and Maldive islands between June and July.

112. *Sterna albifrons* Pallas

Common names : Little Tern or Ternlet (Eng.).

Habits : Resident. Keeps singly or in small loose flocks. Affects tidal creeks, costal lagoons, salt pans, rivers and freshwater jheels. Feeds on small fish, crustaceans and aquatic insects.

Remarks : Uncommon. Only three birds could be seen in different tidal creeks of the sanctuary. Breeds in W Pakistan and NW India.

113. *Sterna bergii* Lichtenstein

Common names : Large crested Tern (Eng.); Periya kondai, kadal kuruvi (Tamil).

Habits : Usually seen singly or in small parties in association with Lesser Crested Tern in offshore waters. Hunts by hovering and plunging chiefly on fish and prawns. Rests on sand banks and estuarine mudflats. Feeds on fish and prawn.

Remarks : Common. Resident to the seaboard of India. Breeds in India on Vengurula rocks off Ratnagiri coast and also in Sundarbans.

114. *Sterna bengalensis* Lesson

Common names : Lesser Crested Tern (Eng.); Kondai kadal kuruvi (Tamil).

Habits : Winter visitor. Found singly or in small parties and flocks at considerable distance out at sea - hardly ever seen on tidal creeks. Found resting on buoys or fishing stakes and sand banks. Feeds chiefly on fish and prawns.

Remarks : Common. Found in fairly good numbers, in suitable habitats of the sanctuary. Breeds in the islands of Persian Gulf during May and June.

115. *Sterna sandvicensis* Latham

Common name : Sandwich Tern (Eng.).

Habits : Winter visitor. Keeps in pairs or in small flocks. Affects costal areas, tidal creeks and open sea. Feeds mainly on fish and marine worms.

Remarks : Rare. Natarajan *etl al.* (1990) reported its occurrence in the sanctuary. But we could not found any specimen during survey periods there. Breeds in European coasts.

Order COLUMBIFORMES

Family COLUMBIDAE

116. *Treron phoenicoptera* (Latham)

Common names : Green Pigeon (Eng.); Pachchai pura (Tamil).

Habits : Resident. Keeps in small flocks but sometimes also found in very large numbers. Affects deciduous forest and fruiting trees around villages and cultivation. Feeds on drupes, berries and wild figs of various Kinds.

Remarks : Common. Found throughout the sanctuary in suitable habitats. Breeds between March and June.

117. *Columba livia* Gmelin

Common names : Indian Blue Rock Pigeon (Eng.); Made pura, Malai pura (Tamil).

Habits : Resident. Keeps in colonies. Feeds on grains, cereals, pulses, groundnuts, weed seeds and green shoots of ground crops. A semi-feral commensal of man, living in and around human settlement.

Remarks : Very common. Found throughout the sanctuary near human habitations. Highly destructive pest to food crops. Breeds throughout the year.

118. *Streptopelia decaocto* (Frivaldszky)

Common names : Indian Ring Dove (Eng.); Kalli pura, Sambal pura (Tamil).

Habits : Resident with seasonal local migration. Keeps in pairs or small parties. Affects open dry country with cultivation and groves and often in the environs of towns and villages. Feeds on grain and seeds.

Remarks : Common. A number of birds were seen inside forests of the sanctuary and also near human habitations. Breeds practically throughout the year.

119. *Streptopelia chinensis* (Gmelin)

Common names : Spotted Dove (Eng.); Pulli Pura (Tamil).

Habits : Resident. Keeps in pairs or small parties. Affects better wooded and watered facies - gardens, groves, cultivation and village environs. Feeds on grains of paddy, cereals, pulses and grass-and - weed seeds.

Remarks : Common. Found throughout the sanctuary. Breeds throughout the year.

Order PSITTACIFORMES
Family PSITTACIDAE

120. *Psittacula krameri* (Scopoli)

Common names : Roseringed Parakeet (Eng.), Kili (Tamil).

Habits : Keeps in small parties or large noisy groups. Feeds mainly on fruits, cereal, grain and seeds of all kinds whether wild or cultivated. Affects moist and dry-deciduous biotope and cultivation near human habitations.

Remarks : Very common. Found throughout the sanctuary. Highly destructive pest to food crops and orchard fruits. A popular pet of the common man. Breeds between January and April / May.

121. *Psittacula cyanocephala* (Linnaeus)

Common names : Blossomheaded Parakeet (Eng.); Kili (Tamil).

Habits : Resident but having local movements with food supply. Keeps usually in small parties. Affects light forest, well-wooded compounds, and cultivation. Feeds on grain and fruit of all kinds, buds and fleshy petals.

Remarks : Moderately common. Only a flock of six birds could be seen throughout the survey period. Breeds between December and April.

Order CUCULIFORMES
Family CUCULIDAE

122. *Clamator jacobinus* (Boddaert)

Common names : Pied Crested Cuckoo (Eng.); Konde kuyil (Tamil).

Habits : Resident, disperses during rainy season. Keeps in loose parties. Affects well-wooded areas and bushes. Feeds on caterpillars, molluscs and insects.

Remarks : Uncommon. Only two birds could be seen throughout the survey period in forest bushes. Breeds between June and September.

123. *Eudynamys scolopacea* (Linnaeus)

Common names : Indian Koel (Eng.); Kuyil (Tamil).

Habits : Resident, nomadic and local migrant. Keeps singly or in pairs. Affects open woodland, gardens and cultivation. Feeds on fruits and berries.

Remarks : Moderately common. Six birds were seen throughout the survey period inside forests of the sanctuary. Breeds between May and July.

124. *Rhopodytes viridirostris* (Jerdon)

Common names : Small Greenbilled Malkoha (Eng.); Kuyil (Tamil).

Habits : Resident. Keeps singly or in pairs. Affects scrub-and-bush terrain and open secondary jungle. Feeds on insects, caterpillars, mantises, lizards and berries.

Remarks : Common. A number of birds were seen throughout the survey period in different habitats. Breeds between March and May.

125. *Centropus sinensis* (Stephens)

Common names : Crow-Pheasant, Coucal (Eng.); Kalli kaka, Chempakan (Tamil).

Habits : Resident. Keeps singly or in pairs. Affects scrub jungle, tall grassland; entering freely in groves, orchards and gardens near habitations. Feeds predominantly on animals; also takes molluscs, crustaceans and insects.

Remarks : Common. Found throughout the sanctuary in different habitats. Breeds between November and May.

Order STRIGIFORMES
 Family STRIGIDAE
 Subfamily TYTONINAE

126. *Tyto alba* (Scopoli)

Common names : Barn Owl (Eng.); Chavu kuruvi (Tamil).

Habits : Resident. Keeps singly or in pairs. Mainly crepuscular and nocturnal. Affects neighbourhood of human habitations, deserted ancient forts, wells and buildings in towns and city suburbs. Feeds on small birds, bats, rats and mice.

Remarks : Uncommon. Only two birds could be seen throughout the survey period. Breeds through the year.

Subfamily STRIGINAE

127. *Otus bakkamoena* Pennant

Common names : Collared Scops Owl (Eng.); Sinna andai, Nathe (Tamil).

Habits : Resident. Keeps singly or in pairs. Nocturnal, seldom seen during day time. Affects forests and well-wooded country near human habitations and cultivation. Feeds on lizards, small birds, rats, mice and insects.

Remarks : Common. A number of birds were seen and their distinctive calls were heard throughout the survey period. Breeds during January and February.

128. *Glaucidium radiatum* (Tickell)

Common names : Jungle Owlet (Eng.); Sinna andai (Tamil).

Habits : Resident. Keeps singly or in pairs. Largely crepuscular. Affects mixed forest and secondary jungle. Feeds on large insects, lizards, small birds and mice.

Remarks : Common. A number of birds were seen in different areas during survey period. Breeds between March and May.

129. *Athene brama* (Temminck)

Common names : Southern Spotted Owlet (Eng.); Pulli andai (Tamil).

Habits : Resident. Keeps in pairs or family parties of 3 or 4. Crepuscular and nocturnal. Affects ruins, mango topes and groves of old trees in and around towns, villages and cultivation. Feeds chiefly on beetles, moths and other insects; also lizards, mice, rats and small birds.

Remarks : Moderately common. A number of birds were seen. Breeds between November to March.

Order CAPRIMULGIFORMES
Family CAPRIMULGIDAE

130. *Caprimulgus indicus* Latham

Common names : Jungle Nightjar (Eng.); Padukai kuruvi (Tamil).

Habits : Resident. Keeps singly or in pairs. Mainly crepuscular and nocturnal. Affects forest glades, open scrub and dry and moist deciduous jungles. Feeds on Moths, Bugs, beetles and other winged insects.

Remarks : Moderately common. Only three birds could be seen throughout the survey period within forests. Breeds between February and May.

131. *Caprimulgus asiaticus* Latham

Common names : Little Nightjar (Eng.); Padukai kuruvi, Kuruttu pakshi (Tamil).

Habits : Resident. Keeps singly or in pairs. Affects thin scrub jungle and fallow land in the neighbourhood of cultivation. Crepuscular and nocturnal. Feeds on dusk-flying insects of various kinds.

Remarks : Moderately common. Only four birds could be seen throughout the survey period near cultivated lands. Breeds between March and May.

Order APODIFORMES
Family APODIDAE
Subfamily APODINAE

132. *Chaetura gigantea indica* Hume

Common name : Brownthroated Spinetail Swift (Eng.).

Habits : Resident. Keeps in small parties or larger flocks. Affects evergreen and moist-deciduous forest. Feeds on insects, mainly beetles, bugs, ants, bees and grasshoppers.

Remarks : Uncommon. Only four birds could be seen throughout the survey period inside the Black Buck enclosure of the sanctuary. Breeding recorded only in Kerala between February and April.

133. *Chaetura sylvatica* (Tickell)

Common names : Whiterumped Spinetail swift (Eng.).

Habits : Keeps in loose disorderly groups of 12 to 50 birds hawking insects all day above forest, river valleys, grassy hilltops and hill cultivation clearings but may turn up almost everywhere. Feeds mainly on flying beetles and bugs. Roosts in colonies, clinging within the hollow holes of rotten and dead trees.

Remarks : Common. A number of birds were seen flying for feeding. Breeds from February to May, chiefly March and April.

134. *Apus affinis* (J.E. Gray)

Common name : House Swift (Eng.).

Habits : Widespread resident, migrate locally during coldest months. Gregarious and predominantly aerial. Keeps in small to large flocks. Affects urban habitations, old forts, ruins and cliffs. Feeds on tiny flying insects, all captured in mid-air.

Remarks : Common near human habitations of the sanctuary area. Breeds throughout the year except the coldest months.

135. *Cypsiurus parvus* (Lichtenstein)

Common names : Palm Swift (Eng.); Ambattan katti (Tamil).

Habits : Resident. Gregarious, usually more scattered; rarely seen in close-packed rabbles. Affects open country and cultivation with palms. Feeds on winged ants, hymenopterous insects, tiny bugs and beetles; all taken in the air.

Remarks : Common. Found in the forested tracts of the sanctuary. Breeds throughout the year, peak periods varying locally.

Order CORACIIFORMES
Family ALCEDINIDAE

136. *Ceryle rudis* (Linnaeus)

Common names : Pied Kingfisher (Eng.); Meenkotti (Tamil).

Habits : Resident. Keeps singly or in pairs. Affects every kind of stagnant freshwater; occasionally also tidal creeks and intertidal pools on the seashore. Feeds mainly on fish; also tadpoles and aquatic insects.

Remarks : Common. A number of birds were seen near different waterbodies. Breeds between February and April.

137. *Alcedo atthis* (Linnaeus)

Common names : Small Blue Kingfisher (Eng.); Meenkotti (Tamil).

Habits : Widespread resident. Usually met singly or in pairs perched on some favourite stake near streams, ponds, roadside ditchess, etc., in open country. Feeds on small fish, tadpoles and aquatic insects.

Remarks : Moderately common. Found near freshwater marshy areas of the sanctuary. Breeds between February and September.

138. *Pelargopsis capensis* (Linnaeus)

Common names : Brownheaded Storkbilled Kingfisher (Eng.); Meenkotti, Kukuluppan (Tamil).

Habits : Resident. Keeps singly or in separated pairs. Affects forest streams, irrigation canals and costal backwaters. Feeds on fish, frogs, lizards, mice and small birds.

Remarks : Uncommon. Only two birds could be seen throughout the survey period near Muniappan Lake. Breeds between February and March.

139. *Halcyon smyrnensis* (Linnaeus)

Common names : Whitebreasted Kingfisher (Eng.); Vichuli, Menkotti (Tamil).

Habits : Keeps singly or in pairs. Resident with local movements. Found near cultivation, forest edges, gardens, and freshwater and coastal wetlands - perched upright on telegraphwire, fence-post or branches. Feeds mainly on insects like grasshoppers, beetles, ants, termites, dragonflies and sometimes also feed on scorpions, centipeds, frogs, lizards, mice and small birds. Fish only a secondary item.

Remarks : Common. Found throughout the sanctuary. Breeds between January and June.

Family MEROPIDAE

140. *Merops leschenaulti* (Vieillot)

Common names : Chestnutheaded Bee-eater (Eng.); Kattalan kuruvi, Panchankam (Tamil).

Habits : Widespread resident. Keeps in parties. Affects the neighbourhood of streams in deciduous forests. Feeds on winged insects.

Remarks : Moderately common. Only seven birds in two parties were found throughout the survey period perching on tree branches and wires near marshy land. Breeds between March and April.

141. *Merops philippinus* Linnaeus

Common names : Bluetailed Bee-eater (Eng.); Kattalan kuruvi, Panchankam (Tamil).

Habits : Keeps in pairs or small flocks. Resident and locally migratory. Prefers areas neighbourhood of jheels, tanks, streams, costal backwaters near forest clearings. Feeds on winged insects like dragonflies, wasps and bees.

Remarks : Common. A good number of birds were seen during survey periods. Breeds between March and June.

142. *Merops orientalis* Latham

Common names : Small Green Bee-eater (Eng.); Kattalan kuruvi, Panchankam (Tamil).

Habits : Resident, with marked seasonal local movements. Keeps in loose parties, usually perched along telegraph wires, or on fence-posts and dead branches. Feeds on winged insects mainly—ants, bees, wasps, moths, butterflies and small beetles. Roosts communally in leafy trees or bamboo clumps.

Remarks : Common. A number of birds were seen during survey period. Breeds between April and July, chiefly during June and July.

Family CORACIIDAE

143. *Coracius benghalensis* (Linnaeus)

Common names : Northern Roller, Blue Jay (Eng.); Pal kuruvi, Kattu kadei (Tamil).

Habits : Resident with seasonal local movements. Keeps singly or in pairs perched on fence posts, telegraph wires and bare trees near cultivation. Feeds mainly on insects, sometimes on small frog, lizards, snakes and field mice.

Remarks : Common. Found throughout the sanctuary. Breeds between March and June. A highly beneficial bird to cultivation for destroying vast quantities of insect pests.

144. *Eurystomus orientalis* (Linnaeus)

Common names : Broadbilled Roller (Eng.); Pulupporukki (Tamil).

Habits : Resident. Keeps singly or in pairs. Affects secondary evergreen jungle and forest clearings with scattered standing trees. Feeds chiefly on insects; also lizards and other small animals.

Remarks : Uncommon. Only a pair was seen sitting on a tall tree inside forest near 'Ramrapadam' of the sanctuary. Breeds between March and May.

Family UPUPIDAE

145. *Upupa epops* Linnaeus

Common names : Hoopoe (Eng.); Chaval kuruvi (Tamil).

Habits : Partly resident and partly winter visitor. Keeps singly or in pairs. Affects open country, cultivation, light forest and habitations. Feeds on different insects and caterpillars.

Remarks : Uncommon. Only four birds could be seen throughout the survey period in forested part of the sanctuary. Breeds between January and April.

Order PICIFORMES

Family CAPITONIDAE

146. *Megalaima zeylanica* (Gmelin)

Common names : Green Barbet (Eng.); Kukkuruvan, Kutur (Tamil).

Habits : Widespread resident. Keeps singly or in small parties. Affects forest, wooded areas and trees near habitations. Feeds on figs, drupes, berries, flower petals and flower nectar. Also takes insects.

Remarks : Moderately common. Only six birds could be seen throughout the survey period in gardens near human habitation. Breeds between March and May.

147. *Megalaima haemacephala indica* (Latham)

Common names : Crimson breasted Barbet or Coppersmith (Eng.); Sinna kukkuruvan (Tamil).

Habits : Widespread resident. Keeps singly or in pairs. Affects roadside avenues, near villages, gardens and compounds. Feeds on fruits, berries and occasionally moths and flying termites.

Remarks : Common. A number of birds were seen in different habitats. Breeds between February and April.

Family PICIDAE

148. *Dinopium benghalense* (Linnaeus)

Common names : Goldenbacked Woodpecker (Eng.); Maramkotti, Tachchan kuruvi, Manu potoku (Tamil).

Habits : Common resident. Keeps in pairs or small parties. Affects every type of wooded country : light forests, plantation, groves and trees in open country. Feeds on insect and its larvae, predominantly ants.

Remarks : Common. Found throughout the sanctuary around forest glade. Breeds between February and July.

149. *Chrysocolaptes lucidus* (Scopoli)

Common names : Larger Goldenbacked Woodpecker (Eng.); Thachchan kuruvi (Tamil).

Habits : Resident. Keeps in pairs. Affects forests and groves. Feeds on insects and grubs.

Remarks : Uncommon. Only a single bird was seen throughout the survey period sitting on a tree branch near 'Ramrapadam' Breeds between December and March.

Order PASSERIFORMES

Family PITTIDAE

150. *Pitta brachyura* (Linnaeus)

Common names : Indian Pitta (Eng.); Arumani kuruvi, Thotta k Allan, Kathelachi (Tamil).

Habits : Resident/winter visitor. Keeps singly or in pairs. Affects scrub jungle, forests and cultivation. Feeds on worms, insects and grubs.

Remarks : Moderately common. Only three birds could be seen throughout the survey period in forest bushes. Breeds between May and August.

Family ALAUDIDAE

151. *Mirafra assamica* Horsfield

Common names : Bush Lark (Eng.); Vanampadi kuruvi (Tamil).

Habits : Resident. Keeps singly, in pairs and small parties. Affects scrub-and-bush jungle, cultivation and fallow land. Feeds on seeds and small insects.

Remarks : Common. A number of birds were seen in different forest bushes and cultivated lands. Breeds between March and May.

152. *Mirafra erythroptera* Blyth

Common names : Redwinged Bush Lark (Eng.); Vanampadi kuruvi (Tamil).

Habits : Resident. Keeps singly, in pairs or small parties. Affects scrubs, bushes and cultivated lands. Feeds on seeds and small insects.

Remarks : Common. A number of birds were seen in different forest bushes. Breeds between March and October.

153. *Eremopterix grisea* (Scopoli)

Common names : Ashycrowned Finch-Lark (Eng.); Vanampadi kuruvi, Manam vanambadi (Tamil).

Habits : Resident. Keeps in pairs or small parties. Affects open scrub, cultivation; also grass covered sandy river banks and dry tidal mudflats near coast. Feeds on vegetable seeds and insects.

Remarks : Common. A number of birds were seen in different forest habitats and cultivated lands. Breeds chiefly between February and September.

154. *Galerida malabarica* (Scopoli)

Common names : Malabar Crested Lark (Eng.); Kondai vanambadi (Tamil).

Habits : Resident. Keeps in pairs or small scattered flocks. Affects scrub jungle, forest clearings, cultivation and grassy edges of tidal mudflats. Feeds on weed seeds, paddy grains and insects.

Remarks : Common. A number of flocks were seen in the scrub jungle areas of the sanctuary. Breeds throughout the year except the months of heaviest rainfall.

155. *Alauda gulgula* Franklin

Common names : Indian Small Skylark (Eng.); Vanambadi kuruvi (Tamil).

Habits : Resident with seasonal local movements. Keeps in pairs or small scattered parties. Affects grassland on the edge of jheels and tanks, cultivation fields and tidal mudflats in coastal tracts. Feeds on weed seeds, roots and bulbs; insects.

Remarks : Moderately common. Only six birds could be seen throughout the survey period in the grassland near wetland of the sanctuary. Breeds between April and June.

Family HIRUNDINIDAE

156. *Hirundo rustica* Linnaeus

Common names : Western Swallow (Eng.); Talai illatha kuruvi, Adai kallan kuruvi, Tam-padi (Tamil).

Habits : Winter visitor. Keeps in flocks, often seen occupying long stretches of telegraph wires. Affects cultivation, habitation, lakes and rivers. Feeds on flying insects.

Remarks : Common. A number of flocks were seen skimming low over water of the sanctuary. Breeds in Pakistan Hills, Himalayas and NE India.

157. *Hirundo daurica* Linnaeus

Common names : Redrumped Swallow (Eng.); Tam padi, Talai illada kuruvi (Tamil).

Habits : Resident, with seasonal local movements. Keeps in pairs, small flocks or family parties. Affects open cultivated country; closely attached to the neighbourhood of water reservoirs, streams and canals. Feeds on insects.

Remarks : Common. A number of birds were seen in different habitats. Breeds between April and August.

Family LANIIDAE

158. *Lanius vittatus* Valenciennes

Common names : Indian Baybacked Shrike (Eng.); Kidhan kuruvi (Tamil).

Habits : Resident, with seasonal movements. Keeps singly or in separated pairs. Affects open scrub and cultivation. Feeds on insects, caterpillars, lizards, mice and nestling birds.

Remarks : Moderately common. Only four birds could be seen throughout the survey period in forest bushes. Breeds between February and April.

159. *Lanius schach caniceps* Blyth

Common names : Greybacked Shrike (Eng.); Kattu kuruvi, Pey kuruvi (Tamil).

Habits : Resident, subject to local seasonal movements. Keeps singly or in widely

separated pairs, each to its own feeding territory. Found sitting upright on bush top, stake or telegraph wire. Feeds on any small living creature that can be overpowered.

Remarks : Common. A number of birds were seen in the forested tract of the sanctuary. Breeds between March and June.

Family ORIOLIDAE

160. *Oriolus oriolus kindoo* Sykes

Common name : Indian Golden Oriole (Eng.).

Habits : Sparse winter visitor to the area. Keeps singly or in pairs. Affects open woodland and trees in cultivation, orchards, gardens around human habitation. Feeds on wild figs, berries, flower-nectar, insects and caterpillars.

Remarks : Common. A number of birds were seen in different habitats of the sanctuary. Breeds between May and June.

161. *Oriolus xanthornus* (Linnaeus)

Common names : Blackheaded Oriole (Eng.); Mambala kuruvi (Tamil).

Habits : Resident. Keeps singly or in pairs. Affects open forest, orchards, gardens, village groves and compounds near habitations. Feeds on fruits, berries and flower-nectar; also takes insects.

Remarks : Common. A number of birds were seen in different habitats. Breeds between March and July.

Family DICRURIDAE

162. *Dicrurus adsimilis* (Bechstein)

Common names : Black Drongo, King Crow (Eng.); Karichan, Kari karuman, Karuvattu vali (Tamil).

Habits : Common resident with some seasonal local migration. Keeps singly perched on tree-tops, fence posts, telegraph wires or on the ground. Feeds mainly on insects; on occasions lizards, small birds and small bats.

Remarks : Common. Found near cultivation and forested areas of the sanctuary. Breeds between March and June. Helps agriculture by destroying vast quantities of insect pests.

163. *Dicrurus leucophaeus* Vieillot

Common names : Grey Drongo (Eng.); Erattai valan kuruvi (Tamil).

Habits Winter visitor. Keeps singly or in pairs. Affects well wooded forested areas, perching high up in tree tops. Feeds mainly on insects of various kinds, also feeds occasionally on lizards and small birds.

Remarks : Uncommon. Only a pair could be seen throughout the survey period in a forest tree. Breeds in Himalayas and NE Indian Hills between April and June.

164. *Dicrurus hottentottus* (Linnaeus)

Common names : Haircrested or Spangled Drongo (Eng.).

Habits : Resident. Keeps singly or in small parties. Affects moist-deciduous and evergreen forests. Feeds on flower-nectar and insects.

Remarks : Rare. Natarajan *et. al.* (1990) reported its occurrence in the sanctuary. We could not see any bird during our entire survey period there. Breeds between March and April.

Family ARTAMIDAE

165. *Artamus fuscus* Vieillot

Common names : Ashy Swallow-Shrike (Eng.); Madam pura (Tamil).

Habits : Resident with seasonal local migration. Gregarious, sociable, keeps in parties. Affects openly wooded country. Feeds on insects; also takes flower-nectar.

Remarks : Moderately common. Only four birds could be seen throughout the survey period in forest habitats. Breeds between March and June.

Family STURNIDAE

166. *Sturnus malabaricus* (Gmelin)

Common names : Greyheaded Myna (Eng.).

Habits : Resident, with marked migration during monsoon and winter. Gregarious, keeps in small flocks. Affects thinly wooded country near human habitations, open secondary jungle and forest plantations. Feeds on fruits, berries and insects.

Remarks : Common. A good number of birds were found in different suitable habitats. Breeds between April and July.

167. *Strunus pagodarum* (Gmelin)

Common names : Blackheaded Myna or Brahminy Myna (Eng.); Papata pariki, Pappatthi nahanavai, Rawanati (Tamil).

Habits : Resident, moving locally with monsoons. Sociable, keeps in small family parties. Affects open forests, scrub jungle, and neighbourhood of human habitations and cultivation. Feeds on fruits, berries and insects.

Remarks : Common. A number of birds were seen in different habitats. Breeds between February and August.

168. *Sturnus roseus* (Linnaeus)

Common names : Rosy Starling, Rosy Pastor (Eng.); Surai kuruvi, Cholam kuruvi (Tamil).

Habits : Winter visitor. Keeps in small parties or large flocks. Affects open cultivation, grassland but avoids forest. Feeds on fruits, berries, cereal grains, flower-nectar and insects.

Remarks : Moderately common. About twenty birds in two flocks were observed throughout the survey period. Breeds in SE Europe and SW Asia during May-June.

169. *Sturnus contra* Linnaeus

Common name : Pied Myna (Eng.).

Habits : Resident, with seasonal local movements. Keeps in small parties or squabbling flocks. Affects cultivation, damp grassland and vicinity of human habitations. Feeds on insects, cereal grains and fruits.

Remarks : Moderately common. Only six birds could be seen throughout the survey period in different cultivated lands. Breeds between March and September.

170. *Acridotheres tristis* (Linnaeus)

Common names : Indian Myna, Common Myna (Eng.); Nahanavai (Tamil).

Habits : Widespread resident. Keeps in small family parties or sometimes in flocks near human habitation and cultivation. Feeds on fruits, grains, insects and grubs but also takes everything that can be eaten.

Remarks : Very common in the sanctuary near human habitation areas. Breeds chiefly between April and July.

Family CORVIDAE

171. *Dendrocitta vagabunda* (Latham)

Common names : Indian Tree Pie (Eng.); Val kakai (Tamil).

Habits : Widespread resident. Keeps in noisy pair or family parties of 4 and 5. Social, arboreal and omnivorous. Affects open wooded country, and gardens with trees and bushes.

Remarks : Common. Found throughout the sanctuary in suitable habitats. Breeds between March and May.

172. *Corvus splendens* Vieillot

Common names : House Crow (Eng.); Nalla kaka, Maniyan kakai (Tamil).

Habits : Widespread resident, subject to seasonal movements. Found around human habitations and cultivation. Very useful as a municipal scavenger. Feeds practically on everything that can be eaten.

Remarks : Much common around human habitations. Breeds between March and August, but peak periods varying locally.

173. *Corvus macrorhynchos* Wagler

Common names : Indian Jungle Crow (Eng.); Andan kakdi, Karun kakdi (Tamil).

Habits : Less gregarious and sociable than House Crow. Keeps singly or in pairs and small scattered parties. Widespread resident. A regular marauder of birds nest and often becomes a serious meanance to poultry keepers. Feeds on animal and vegetable matters.

Remarks : Common. Found in different habitats of the sanctuary. Breeds between February and June, varying locally.

Family CAMPEPHAGIDAE

174. *Tephrodornis pondicerianus* (Gmelin)

Common name : Indian Wood Shrike (Eng.).

Habits : Resident. Keeps in pairs or small parties. Affects open broadleaved forest, secondary growth and well wooded forests. Feeds on caterpillars, spiders and insects.

Remarks : Moderately common. Only four birds could be seen throughout the survey period in forest bushes. Breeds between February and July.

175. *Coracina novaehollandiae* (Gmelin)

Common name : Large Cuckoo-Shrike (Eng.).

Habits : Resident. Keeps in pairs or loose parties. Affects open wooded country and cultivations with tall trees. Feeds on insects and their larvae.

Remarks : Moderately common. Only three birds could be seen throughout the survey period inside forests. Breeds between March and July.

176. *Coracina melanoptera* (Ruppell)

Common name : Blackheaded Cuckoo-Shrike (Eng.).

Habits : Resident and local migrant. Keeps singly or in pairs. Affects open deciduous or mixed forests, thick hedges, groves, gardens and secondary jungle. Feeds mainly on insects; also takes berries.

Remarks : Moderately common. Only five birds could be seen throughout the survey period in forest habitats. Breeds between April and May.

177. *Pericrocotus flammeus* (Forster)

Common names : Scarlet Minivet (Eng.); Mambala kuruvi, Potkuruvi (Tamil).

Habits : Widespread resident. Keeps in small flocks. Affects forest canopy. Feeds on caterpillars, green crickets, cicadas and other insects.

Remarks : Common. Found throughout the forested tracts of the sanctuary. Breeds between June and September.

Family IRENIDAE

178. *Aegithina tiphia* (Linnaeus)

Common names : Indian Iora (Eng.); Sinna mampala-kuruvi, Pachapora (Tamil).

Habits : Widespread resident. Keeps in pairs. Affects deciduous facies in thin jungle and scrub. Feeds on insects and larvae, spiders.

Remarks : Common. Found throughout sanctuary in different habitats. Breeds between April and May.

179. *Chloropsis cochinchinesis* (Gmelin)

Common name : Goldmantled chloropsis (Eng.).

Habits : Resident. Entirely arboreal; keeps singly or in pairs. Affects scrub jungle, forest edges, groves and leafy trees on village outskirts. Feeds on insects, caterpillars, wild figs, berries and flower-nectar.

Remarks : Moderately common. Only eight birds could be seen throughout the survey period in different habitats. Breeds between April and August.

180. *Irena puella* (Latham)

Common name : Fairy Bluebird (Eng.).

Habits : Resident, subject to seasonal wandering with disjunct range of distribution. Keeps in small parties. Affects moist-deciduous, evergreen forests and deep jungle. Feeds on fruit, berries and nectar.

Remarks : Uncommon. Only a group of four birds could be seen throughout the survey period inside forested part of the sanctuary. Breeds between February and April.

Family PYCNONOTIDAE

181. *Pycnonotus jacosus* (Linnaeus)

Common names : Redwhiskered Bulbul (Eng.); Konda - kloti-kuruvi (Tamil).

Habits : Resident, Keeps in pairs or loose flocks. Affects open scrub jungle, cultivation and urban gardens. Feeds on insects, spiders, fruits, flower-buds and berries.

Remarks : Common. A number of birds were seen in different habitats. Breeds between December and June.

182. *Pycnonotus cafer* (Linnaeus)

Common names : Redvented Bulbul (Eng.); Konda-lati, Kondai kuruvi (Tamil).

Habits : Resident. Keeps in pairs or small parties. Affects light scrub, gardens, secondary jungle and light deciduous forest. Feeds on fruits and berries.

Remarks : Common. Found throughout the sanctuary and also near human habitations. Breeds between February and November, chiefly during the monsoon.

183. *Pycnonotus luteolus* (Lesson)

Common names : Whitebrowed Bulbul (Eng.); Manjat kondai kuruvi (Tamil).

Habits : Resident. Keeps in pairs. Affects dry scrub, forest edges and thickets near villages. Feeds on fruits, berries and flower-nectar; also takes spiders and small insects.

Remarks : Moderately common. Only four birds could be seen throughout the survey period in forest edges. Breeds between April and August.

Family MUSCICAPIDAE
Subfamily TIMALINAE

184. *Pomatorhinus schisticeps* Hodgson

Common name : Scimitar Babbler (Eng.).

Habits : Resident. Keeps in pairs or small parties. Affects forests and secondary growth. Feeds on insects, grubs, spiders, berries and flower-nectar.

Remarks : Uncommon. Only two birds could be seen throughout the survey period in forest bushes. Breeds between November and March.

185. *Dumetia hyperythra* (Franklin)

Common name : Whitethroated Babbler (Eng.).

Habits : Resident. Keeps in loose flocks. Affects tall grass and scrub land. Feeds mainly on insects, also takes flower-nectar.

Remarks : Moderately common. Only six birds could be seen throughout the survey period in forest bushes. Breeds during monsoon between June and October.

186. *Chrysomma sinense* (Gmelin)

Common name : Yellow-eyed Babbler (Eng.).

Habits : Widespread resident. Keeps in small parties. Affects tall grass, bushes, fields and scrubs. Feeds on insects, caterpillars, spiders, berries and nectar.

Remarks : Common. A number of birds were seen in different habitats. Breeds chiefly between July and August.

187. *Turdoides caudatus* (Dumont)

Common names : Common Babbler (Eng.); Huni (Tamil).

Habits : Resident. Keeps in Small to large flocks. Affects scrub jungle, sandy flood plains, cultivated fields and gardens. Feeds mainly on insects.

Remarks : Common. A number of birds were seen in different suitable habitats. Breeds between March and July.

188. *Turdoides striatus* (Dumount)

Common names : Jungle Babbler (Eng.); Velaikkara-kuruvi (Tamil).

Habits : Resident. Keeps in parties. Affects forest, cultivation and gardens. Feeds on insects and spiders.

Remarks : Common. A good number of birds were seen in different habitats throughout the survey period. Breeds between June and August.

189. *Turdoides affinis* (Jerdon)

Common names : Whiteheaded Babbler (Eng.); Thavittu-kuruvi, Pandri-kuruvi (Tamil).

Habits : Resident. Keeps in small parties. Often found in association with 'Jungle Babbler' Affects scrubs, cultivated lands, orchards, urban gardens and compounds. Feeds on insects and vegetable matters.

Remarks : Common. A number of birds were seen in different suitable habitats. Breeds overall between January and November having two peak periods.

Subfamily MUSCICAPINAE

190. *Muscicapa parva* Bechstein

Common names : Redbreasted Flycatcher (Eng.); Pattuk kuruvi, Yeepidippan, Chuvappunencha kuruvi (Tamil).

Habits : Winter visitor. Keeps singly. Affects bushes, scrub jungle, groves and orchards. Feeds on insects.

Remarks : Moderately common. Only three birds could be seen throughout the survey period in forest bushes. Breeds from the Urals to Kamchatka.

191. *Muscicapa tickelliae* (Blyth)

Common names : Tickell's Blue Flycatcher (Eng.); Neelakkuruvi (Tamil).

Habits : Resident, subject to local movements. Keeps singly or in mixed hunting parties. Affects thick bushes, forests, streams, village groves, gardens and orchards. Feeds on insects.

Remarks : Common. A number of birds were seen in different habitats. Breeds between April and June.

192. *Muscicapa thalassina* Swainson

Common names : Verditer Flycatcher (Eng.); Neelameni (Tamil).

Habits : Winter visitor. Keeps singly or in pairs. Affects edges of forests, bushes along streams, groves and gardens. Feeds on insects.

Remarks : Moderately common. Only four birds could be seen throughout the survey period in forest bushes. Breeds in Himalayas and NE India between April and August.

193. *Rhipidura aureola* Lesson

Common names : Whitebrowed Faintail Flycatcher (Eng.); Visiri-vali (Tamil).

Habits : Resident, subject to local movements. Keeps singly or in pairs. Affects forests, groves, orchards, gardens and light scrub jungle. Feeds on insects.

Remarks : Moderately common. Six birds could be seen throughout the survey period in different habitats. Breeds between April and May.

Subfamily MONARCHINAE

194. *Terpsiphone paradisi* (Linnaeus)

Common names : Paradise Flycatcher (Eng.); Piramana-kuruvi, Vedivat-kuruvi (Tamil).

Habits : Resident with local movements. Keeps in pairs. Affects well-watered shady forest, scrubs; plantation, village groves, gardens and orchards. Feeds on winged insects.

Remarks : Common. A number of birds were seen in the forested tract of the sanctuary. Breeds between April and July.

195. *Monarcha azurea* (Boddaert)

Common names : Blacknaped Monarch Flycatcher (Eng.); Yeepidippan (Tamil).

Habits : Resident. Keeps singly or in pairs. Affects forests, secondary jungle, cultivation and heavy foliage along streams. Feeds on winged insects.

Remarks : Uncommon. Only a pair could be seen throughout the survey period in forest habitat near 'Ramrapadam' Breeds between March and August.

Subfamily SYLVIINAE

196. *Prinia hodgsonii* Blyth

Common names : Ashy-grey Wren-Warbler (Eng.); Kosu katai, Nunni chirai (Tamil).

Habits : Resident. Keeps singly or in pairs. Affects bushes at forest edges, scrubs, cultivation, mangrove swamps and reeds. Feeds chiefly on insects and caterpillars.

Remarks : Moderately common. Only five birds could be seen throughout the survey period in different forest bushes. Breeds between April and August during the height of the monsoon.

197. *Prinia subflava* (Gmelin)

Common names : Plain Wren-Warbler (Eng.); Tinu-kuruvi (Tamil).

Habits : Resident. Keeps in pairs or small parties. Affects scrubs, grassland, cultivated lands, mangroves and salt-marsh vegetation. Feeds on insects and flower-nectar.

Remarks : Moderately common. Only five birds could be seen throughout the survey period in different habitats. Breeds between June and October, depending on monsoon.

198. *Prinia socialis* Sykes

Common names : Ashy Wren-Warbler (Eng.); Tinu-kuruvi (Tamil).

Habits : Resident. Keeps singly or in pairs. Affects open scrub jungle, grassland and scrub near streams, reed-beds, cultivation and gardens. Feeds on insects and their larvae, spiders and flower-nectar.

Remarks : Moderately common. Only six birds could be seen throughout the survey period in grasslands. Breeds between April and July.

199. *Orthotomus sutorius* (Pennant)

Common names : Tailor Bird (Eng.); Thaiyal chittu, Pon chittu (Tamil).

Habits : Widespread resident. Keeps singly or in pairs. Affects bushes in gardens, cultivation edges and forest edges. Feeds on small insects and their larvae; also feeds on flower - nectar.

Remarks : Common. A good number of birds were seen in different habitats of the sanctuary. Breeds between June and August during monsoon period.

200. *Acrocephalus stentoreus* (Hemprich & Ehrenberg)

Common names : Great Reed Warbler (Eng.); Kosu kattai, Nunki chirai (Tamil).

Habits : Winter visitor, passage migrant and breeder. Keeps singly or in pairs. Affects tall bushes around lakes, ponds, jheels and canals. Feeds mainly on Grasshoppers and other insects.

Remarks : Moderately common. Only eight birds could be seen throughout the survey period in different bushes. Breeds between May and August.

201. *Acrocephalus dumetorum* Blyth

Common name : Blyth's Reed Warbler (Eng.).

Habits : Winter visitor. Keeps singly. Affects bushes, hedges, orchards and grain fields. Feeds on insects.

Remarks : Moderately common. Only three birds could be seen throughout the survey period in forest bushes. Breeds in central Eurasia between June and July.

202. *Hippolais caligata* (Lichtenstein)

Common name : Booted Tree Warbler (Eng.).

Habits : Winter visitor. Keeps singly or in loose flocks. Affects scrub jungle, grasslands, cultivated lands; also gardens and hedges. Feeds mainly on insects.

Remarks : Moderately common. Only six birds could be seen throughout the survey period in different habitats. Breeds from Pakistan to southern Siberia.

203. *Sylvia curruca* (Linnaeus)

Common name : Lesser Whitethroat (Eng.).

Habits : Winter visitor. Keeps singly or in pairs. Affects scrub jungle and *Acacia* bushes. Feeds on insects.

Remarks : Moderately common. Only five birds could be seen throughout the survey period in forest bushes. Breeds in central Siberia between April and August.

204. *Phylloscopus trochiloides* (Sundevall)

Common name : Greenish Leaf Warbler (Eng.).

Habits : Winter visitor. Keeps singly, sometimes among mixed foraging parties. Affects jungle, orchards, gardens and *Acacia* groves. Feeds on insects and caterpillars.

Remarks : Moderately common. Only four birds could be seen throughout the survey period inside forests. Breeds in Turkestan, eastern Siberia, western China and Iran between May and August.

Subfamily TURDINAE

205. *Copsychus saularis* (Linnaeus)

Common names : Magpie-Robin (Eng.); Gundoo-kavitchan, Vannati-kuruvi, Patkari-kuruvi (Tamil).

Habits : Widespread resident. Keeps singly or in pairs. Affects gardens, orchards, plantations, scrub jungle and open broadleaved forest near human habitations. Feeds on insects, caterpillars, dragonflies and small lizards.

Remarks : Common. Found throughout the sanctuary. Breeds between March and May.

206. *Saxicola caprata* (Linnaeus)

Common names : Pied Bush chat (Eng.); Kallu kuruvi (Tamil).

Habits : Resident. Keeps singly or in separated pairs. Affects cultivated fields and open country with scattered bushes and tall grasses. Feeds on insects and their larvae, spiders and some vegetable matter.

Remarks : Common. A number of birds were seen in different habitats. Breeds between February and May.

207. *Saxicoloides fulicata* (Linnaeus)

Common names : Indian Robin (Eng.); Wannati-kuruvi, Kari-kuruvi (Tamil).

Habits : Widespread resident. Keeps singly or in pairs. Affects thin scrub jungle, forest, sparse bushes, paddyfields and village gardens. Feeds on insects and their larvae.

Remarks : Common. A number of birds were seen in different habitats. Breeds between December and April.

208. *Turdus merula* Linnaeus

Common names : Blackbird (Eng.); Karun kuruvi (Tamil).

Habits : Resident. Keeps singly or in pairs. Affects forests, gardens and well shaded areas of plantations. Feeds on insects, slugs, earthworms, snails, fruits and berries.

Remarks : Moderately common. Only four birds could be seen throughout the survey period in forested tracts. Breeds between March and August, depending on rains.

Family MOTACILLIDAE

209. *Anthus novaeseelandiae* Gmelin

Common names : Paddyfield Pipit (Eng.); Pulla purake, Nettai-kali (Tamil).

Habits : Resident with local movements. Keeps in pairs or small loose flocks. Affects open grassland, fallow fields, edges of cultivation and local village grazing grounds. Feeds on insects and their larvae.

Remarks : Moderately common. Only ten birds could be seen throughout the survey period in different suitable habitats of the sanctuary. Breeds from November till rains in June.

210. *Anthus godlewskii* (Teczanowski)

Common names : Blyth's Pipit (Eng.); Pulla puraki (Tamil).

Habits : Widespread winter visitor. Keeps singly or in scattered loose flocks. Affects open sparsely scrubbed fallow land and ploughed fields. Feeds on insects and weed seeds.

Remarks : Uncommon. Only four birds could be seen throughout the survey period in a cultivation land of the sanctuary. Breeds in eastern Asia.

211. *Motacilla indica* Gmelin

Common names : Forest Wagtail (Eng.); Kodikal valati (Tamil).

Habits : Winter visitor. Keeps singly or in loose pairs. Affects well shaded plantations, footpaths through forest and glades. Forages mostly on the ground and feeds on ants, other small insects and spiders.

Remarks : Uncommon. Only four birds could be seen throughout the survey period in a scrubby jungle of the sanctuary. Breeds in eastern Asia during May and June.

212. *Motacilla flava* Linnaeus

Common name : Yellow Wagtail (Eng.).

Habits : Winter visitor. Keeps in scattered pairs or parties. Affects marshes, grassy margins of tanks and jheels, and irrigated rice-fields. Feeds on insects, their larvae; and tiny molluscs.

Remarks : Uncommon. Only four birds could be seen throughout the survey period feeding in a cultivated land of the sanctuary. Breeds in Siberia.

213. *Motacilla caspica* (Gmelin)

Common name : Grey Wagtail (Eng.).

Habits : Winter visitor. Keeps singly or in separated pairs. Affects slower streams in lowland and foothills. Feeds on insects and tiny molluscs.

Remarks : Moderately common. Only six birds could be seen throughout the survey period running and feeding on the edges of Muniappan Lake. Breeds in the palaeartic region.

214. *Motacilla alba* Linnaeus

Common name : White Wagtail (Eng.).

Habits : Winter visitor. Keeps singly, in pairs or small loose flocks. Affects vicinity of rivers, streams, tanks, flooded lands, cultivated lands, compounds and suburbs. Feeds on insects and their larvae.

Remarks : Common. A number of birds could be seen in different habitats of the sanctuary. Breeds in western Siberia.

215. *Motacilla maderaspatensis* Gmelin

Common names : Large Pied Wagtail (Eng.); Vannathi kuruvi, Kulatthu kuruvi (Tamil).

Habits : Resident. Keeps usually in pairs. Affects watercourses, smooth running streams, pools and occasionally cultivated lands and lawns. Feeds on insects and small seeds.

Remarks : Common. A number of birds were seen throughout the sanctuary in different habitats. Breeds between March and June.

Family DICAETIDAE

216. *Dicaeum erythrorhynchos* (Latham)

Common name : Tickells' Flowerpecker (Eng.).

Habits : Resident. Keeps singly, in pairs, or in loose parties. Affects forest plantation, groves, orchards and cultivation. Feeds on berries, spiders and small insects.

Remarks : Common. A number of birds were seen throughout the survey period in different habitats. Breeds between February and May and again in August-September.

Family NECTARINIIDAE

217. *Nectarinia zeylonica* (Linnaeus)

Common names : Purplerumped Sunbird (Eng.); Then-kudi, Pu-kudichan (Tamil).

Habits : Resident. Keeps in pairs. Affects scrub, light secondary jungle and cultivation near villages. Feeds on nectar of flowers.

Remarks : Common. A number of birds were seen throughout the survey period in different habitats. Breeds between February and April.

218. *Nectarinia lotenia* (Linnaeus)

Common names : Maroonbreasted Sunbird (Eng.); Pan chittu, Then chittu (Tamil).

Habits : Resident. Keeps singly or in pairs. Affects well-wooded country, scrubs, gardens and cultivation. Feeds on nectar of flowers.

Remarks : Moderately common. Only five birds were seen throughout the survey period in different habitats. Breeds between March and May.

219. *Nectarinia asiatica* (Latham)

Common names : Purple Sunbird (Eng.); Then-kudi, Pu-kudichan (Tamil).

Habits : Resident. Keeps singly or in pairs. Affects light forest, semi-cultivation, gardens and compounds. Feeds on nectar of flowers.

Remarks : Common. A good number of birds were seen in different habitats. Breeds between February and June.

Family ZOSTEROPIDAE

220. *Zosterops palpebroso* (Temminck)

Common names : White-eye (Eng.); Kannadi kuruvi (Tamil).

Habits : Resident. Keeps in pairs or in parties. Affects gardens, orchards, groves and forests. Feeds on vegetative matters, insects and caterpillars.

Remarks : Common. A number of birds were seen in different forested areas. Breeds between June and July.

Family PLOCEIDAE
Subfamily PASSERINAE

221. *Passer domesticus* (Linnaeus)

Common names : House Sparrow (Eng.); Ur kuruvi, Adaikala kuruvi (Tamil).

Habits : Widespread resident. Keeps in pairs or small parties. Affects cities, suburbs, villages, and human habitations. Feeds on vegetative matters and insects.

Remarks : Common in and around human habitations. Breeds throughout the year.

Subfamily PLOCEINAE

222. *Ploceus philippinus* (Linnaeus)

Common names : Indian Baya (Eng.); Thonga-nathan, Thukanan-kuruvi, Manja-kuruvi (Tamil).

Habits : Resident. Gregarious, keeps in flocks. Affects cultivation, paddyfields, grassland and secondary scrubs. Feeds on seeds, grains and insects.

Remarks : Common. A number of flocks were seen throughout the survey period in different habitats. Breeds between April and October, depending on monsoon rains.

Subfamily ESRILDINAE

223. *Lonchura malabarica* (Linnaeus)

Common names : Whitethroated Munia (Eng.); Nellu-kuruvi (Tamil).

Habits : Widespread resident. Keeps in flocks. Affects grassland, cultivation and scrubbed jungle. Feeds on small insects and grass seeds.

Remarks : Common. A number of birds were found throughout the survey period in different habitats. Breeds between December and March.

224. *Lonchura striata* (Linnaeus)

Common names : Whitebacked Munia (Eng.); Nellu-kuruvi, Tinai-kuruvi (Tamil).

Habits : Resident. Keeps in flocks. Affects light scrub jungle, cultivation and gardens. Feeds on grass seeds and insects.

Remarks : Common. A number of birds were seen in grasslands and cultivated fields. Breeds between July and December.

225. *Lonchura punctulata* (Linnaeus)

Common names : Spotted Munia (Eng.); Neelu-kuruvi, Tinna-kuruvi (Tamil).

Habits : Resident. Keeps in flocks. Affects scrub jungle, grassland, gardens and cultivation. Feeds on grass seeds, rice and berries.

Remarks : Common. A number of birds were seen in different habitats. Breeds between May and September during monsoon.

226. *Lonchura malacca* (Linnaeus)

Common names : Blackheaded Munia (Eng.); Thinai kuruvi, Nellu-kuruvi (Tamil).

Habits : Resident. Keeps in flocks. Affects marshland, reed-beds, grass fields and cultivation. Feeds on grass seeds and rice.

Remarks : Common. A number of flocks were found throughout the survey period in different habitats. Breeds between June and September.

DISCUSSION

The Sanctuary is one of the important refuges for the migratory wintering waterbirds. The tropical dry evergreen forest is of great value in the preservation of the biological diversity of its kind. This highly fragile ecosystem is being endangered by the following factors :

- (i) Two companies are manufacturing industrial salt in the sanctuary area since 1963. Both the companies also produce Bromine. During this process, the waste product called as 'Bittern', which is having high concentration of Calcium, Magnesium and Sodium salt, are being released untreated into the swamp. This practice is detrimental to marine benthic organisms and need be stopped as during rainy season migratory water birds also use these habitats in addition to the swamp area. New proposals to start more salt based industries are also of great concern.
- (ii) Collection of firewood by the local inhabitants in an uncontrolled manner is likely to cause habitat destruction in near future.
- (iii) Collection and removal of litters is also of great concern and need be controlled.

- (iv) Catching of fish and prawns from the swamp area is a regular practice. This is causing habitat destruction and is causing disturbance to the migratory waterbirds while feeding and resting.
- (v) The Sanctuary was found to have a lot of hunting pressure. On a number of occasions the survey party found a number of ducks lying dead in different places of the swamp area being shot by firearms. This need be stopped immediately. Otherwise in near future these wintering waterbirds may avoid this area out of fear.
- (vi) Cattle were found grazing even in the deepest part of the forest. Huge grazing of domestic cattle not only degrades the habitat but also will lead to serious outbreak of contagious disease among the wild herbivores.

RECOMMENDATION

To conserve the Sanctuary which is part of a coastal, marine influenced ecosystem following recommendations may be considered.

- (a) The salt works within the sanctuary should not be allowed to be expanded. 'Bittern' to be released into the swamp only after being treated properly.
- (b) Collection of fire wood and other forest products inside the sanctuary need be controlled and alternative sources of firewood for local communities need be developed. However, attempts should be made to minimize their requirement gradually. Supply of low fuel consuming oven, use of solar energy and social forestry may come under this programme.
- (c) Grazing of livestock within the sanctuary should be controlled. Free inoculation of domestic cattle must be arranged to minimize spreading of contagious diseases.
- (d) Protective status of the entire sanctuary and the adjacent Great Vedaranyam Swamp need be upgraded.
- (e) Well-eaipped research wing should be arranged immediately. This wing will carry out researches on the eco-development of the area, status of different species, population fluctuations, animal behaviour, diseases and others. Carrying capacity of the sanctuary need also be studied from time to time.
- (f) Unless the local people are taken into confidence, no conservation programme can achieve any success. Awarness programme must be organised regularly to make the local people understand that the sanctuary is not against them, rather it is for

them. In this course, fullest cooperation from them may be received for the conservation of this sanctuary which will serve as substantial resource for future generations.

ACKNOWLEDGEMENTS

Thanks are due to the Director, Zoological Survey of India for providing necessary facilities for the work. We are thankful to the Chief Wildlife Warden, Tamil Nadu and other officials of the State Forest Department for rendering various help for conducting the survey. We are also thankful to the local people for their meaningful help during the survey work. We express our sincere thanks to Dr. Gopinathan Maheshwaran, Scientist - 'B', for his untiring help in various ways during preparation of this manuscript.

REFERENCE

- ALI, S. 1963. Pt. Calimere as a refuge for wintering shore birds. *J. Bombay nat. Hist. Soc.*, **60** : 458-460.
- ALI, S. & RIPLEY, S.D. 1983. *Handbook of the birds of India and Pakistan, together with those of Bangladesh, Nepal, Bhutan and Sri Lanka*. Compact Edition. Oxford University Press, Delhi.
- BALACHANDRAN, S. & NATARAJAN, V. 1992. Possible occurrence of four subspecies of lesser sand plover *Charadrius mongolus* at Pt. Calimere Wildlife Sanctuary, Tamil Nadu. *J. Bombay nat. Hist. Soc.*, **89**(1) : 118-119.
- CUSTER, T.W. & OSBORN, R.G. 1978. Feeding site description of three heron species near Beaufort, North California. *Wading Birds*, 335-360.
- DANIEL, J.C. 1967. The Point Calimere Sanctuary, Madras State. *J. Bombay nat. Hist. Soc.*, **64** : 512-523.
- EMLLEN, J.T. 1971. Population densities of birds derived from transect count. *Auk*, **88** : 323-342.
- MANAKADAN, R. 1993. The White Stork *Ciconia ciconia* at Point Calimere. *J. Bombay nat. Hist. Soc.*, **90**(2) : 285.
- MANAKADAN, R. 1995. Impact of salt works on the status, population of the Greater Flamingo *Phoenicopterus ruber roseus* and the Lesser Flamingo *Phoeniconaias minor* in the Great Vedaranyam Swamp. *J. Bombay nat. Hist. Soc.*, **92**(3) : 364-371.

- NATARAJAN, V. 1992. Wintering waterbirds at Point Calimere, Tamil Nadu, *J. Bombay nat. Hist. Soc.*, **89**(3) : 316-328.
- NATARAJAN, V. & BALASUBRAMANIAN, P. 1990. Occurrence of Hair-crested Drongo *Dicrurus hottentottus* (Linnaeus) in Point Calimere, Tamil Nadu. *J. Bombay nat. Hist. Soc.*, **87**(1) : 147.
- NATARAJAN, V., BALASUBRAMANIAN, P., ALGARRAJAN, S. & MANAKADAN, R. 1990. Further additions to the avifauna of Point Calimere. *J. Bombay nat. Hist. Soc.*, **87**(3) : 457.
- SUGATHAN, R. 1982. Some interesting aspects of the Avifauna of the Pt. Calimere Sanctuary, Thanjavur district, Tamil Nadu. *J. Bombay nat. Hist. Soc.*, **79**(3) : 567-575.



Map of Point Calimere Wildlife and Bird Sanctuary



Entrance of Point Calimere Wildlife and Bird Sanctuary.



View of Muniappan lake



View of forest type



Salt pans in the Sanctuary



Large Egret



Different water birds in feeding ground



Congregation of Different water birds



Painted Stork



Jungle owlet



Pea Fowl



Rufous Babbler



Roosting Night Herons



Pintail duck found shot dead



Mangrove swamp in Muniappan Lake



Domesticating cattles grazing inside the sanctuary