A BIRD SURVEY IN THE SILENT VALLEY NATIONAL PARK, KERALA





Sálim Ali Centre for Ornithology & Natural History Anaikatty, Coimbatore

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INTRODUCTION

Management of any protected area needs the baseline data on the fauna and flora it supports and monitoring the major components of the ecosystem. The Silent Valley National Park is famous as having one of the largest extents of the pristine wet evergreen forests in the Western Ghats supporting a viable population of the endangered and endemic Lion-tailed Macaque. The Western Ghats is one of the 18 global hotspots of biodiversity (Myers 1988) and one of the 218 endemic bird areas of the world (Stattersfield *et al.* 1998). This National Park is recently identified as one of the Important Bird Areas of the country supporting most of the rare and endemic birds of the region.

As a part of the monitoring programme for the major fauna of the National Park, the park authorities requested SACON to conduct a short survey of the birds in March. Hence, a team of five persons conducted the survey during 28 to 30 March 2000 covering the major habitats in different altitudes and regions of the National Park.

STUDY AREA

Silent Valley National Park (11°4' to 13' N and 76°24' to 29' E) forming the core area of the Nilgiri Biosphere Reserve, is located in the Western Ghats Biotic Province in the Palghat District of Kerala and comprises an area of 8952 ha, lying contiguous to the reserve forests of Attapadi, New Amarambalam, Mukkali and Kundha (fig. 1). After a much prolonged and complicated dispute over the construction of a dam at Silent Valley between the State Government and Ecologists, it was declared a National Park in 1980.

The National Park has natural boundaries on all sides with high peaks and ridges with precipitous slopes. The highest peak is in the Northeastern region at Anginda, 2383 m above MSL. The River Kunthipuzha flows through the area and has numerous perennial tributaries joining at elevations ranging from 900 to 1862 m. South-west and North-east monsoons are experienced here with heavy downpour during June, July, August. Comparatively drier months are January, February and March. The average annual rainfall varies in different regions increasing with the elevation, 3200 mm at Sairandhri to 4500 mm at Neelikkal. The northern portion receives the maximum rainfall, 7500 mm. The average minimum temperature varies from 8 to 19°C and the maximum from 23 to 29°C. The highest temperature is in May and the lowest in January.

Vegetation of Silent Valley area comprises mainly the west-coast tropical evergreen and semi-evergreen forests as described by Champion and Seth (1968). At higher elevations Southern montane wet temperate forests and grasslands predominate. Cane and reed beds and bamboo brakes are interspersed with the evergreen and semi-evergreen forests in many localities. Mixed moist deciduous forest and Savanna woodland also exist in some areas. The genetic diversity of plants is extremely rich. A total of 666 species of plants have been identified from Silent Valley (Manilal 1988).

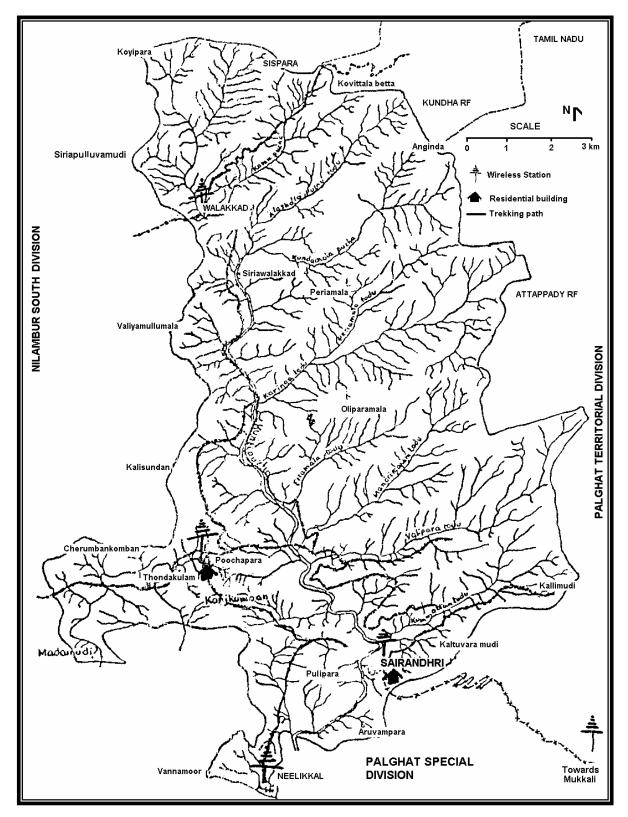


Figure 1. Map of Silent Valley National Park

Many new species and even genera have been described from this area by the Botanical Survey of India. The major forest types occurring in different habitats are given below.

1. West Coast Tropical wet evergreen forests

Extensive stretch of this type of forest extends over the hills and valleys at elevations ranging from 900 to 1300 m from the south-east border to Walakkad in the south-west and along the River Kunthipuzha and its tributaries. This is the dominant vegetation in the Park with huge trees of maximum height of about 40 to 45 m and the canopy layer in different strata of trees and shrubs. The ground has plant litter without much vegetation. Climbers, epiphytes, cane and reeds are common in this habitat. The dominant species of trees are *Cullenia exarillata, Palaquium ellipticum, Mesua ferrea, Calophyllum elatum, Eleocarpus* spp., *Persea macrantha, Canariun strictum, Artocarpus* sp., *Syzygium* sp., *Heriteria* sp., *Trema orientalis, Actinodaphne hookeri, Myristica* sp., *Cinnamomum zeylanicum, Hydnocarpus* sp., *Garcinia spicata.* The undergrowth of shrubs consists of *Clerodendron infortunatum, Macaranga* sp., *Pandanus* sp., and *Ochlandra* spp., and *Elettaria cardomomum* are also common in many localities, *Ochlandra* mainly along the river banks.

Slightly disturbed areas at lower elevations and towards the south and south-east parts are semi-evergreen type with less tall evergreen trees mixed with some deciduous trees, *Lagerstroemia* spp., *Terminalia* spp. and others. Tree species and number are less here when compared to the evergreen forests.

2. Subtropical evergreen hill forests

The evergreen forests extending up the hill at higher elevations above 1500 m are the subtropical evergreen hill forests. The trees species are those commonly found in the wet evergreen forests, but stunted in growth, probably because soil layer is thin and wind is very strong. A thick growth of trees with almost fully covered canopy with abundant lichen and moss on the branches are peculiar to this habitat.

3. Southern montane wet temperate forests and grasslands

At higher elevations than the subtropical evergreen hill forests, the montane grasslands form the major habitat with patches of forests on the sides or in between the hills known as shola forests. Here the trees are much stouter and more branched. *Rhododendron arboreum* is typical of this kind of forest. *Eugenia* sp., *Cinnamomum wightii, Ilex* sp., *Mahonia leschenaulti* are common. *Strobilanthus* spp. form the undergrowth in patches.

The montane grasslands have short grasses, the major species being *Themeda* sp, *Ischaemum* sp. *Isachne* sp, *Chrysopogon* sp. *Carex* spp. are abundant on the edges of the small streams.

4. Savanna woodland and moist deciduous forests

Grasslands at lower elevations compared to those of the montane grasslands have taller grasses, the dominant species being *Cymbopogon* sp., *Chrysopogon* sp., and *Themeda* sp. Other species such as *Digitaria* sp., *Dicanthium* sp., and *Eragrostis* sp., are also common. These grasslands are interspersed with a few small trees of *Careya arborea*, *Phyllanthus emblica* or *Dalbergia latifolia* which are shorter than those in the moist deciduous forests. *Phoenix* sp., is common in some areas. These areas are prone to fire.

The moist mixed deciduous forest is present only in a small area towards the southeastern parts of the National Park. Many deciduous species such as *Terminalia* spp., *Grewia tiliifolia, Lagerstroemia lanceolata, Pterocarpus marsupium, Careya arborea* are common in this habitat. *Bambusa arundinacea* thickets are present in some areas.

METHODS

A team of five experts with ten field assistants conducted the survey during 28 to 30 March 2000 covering seven areas, namely Sairandhri, Parathode, Thondakulam, Neelikkal, Poochappara, Walakkad and Sispara. About 25 km² area was surveyed during this study including the major vegetation types proportionately. Line transect and circular plot methods were used for the survey, the latter in the steep slopes especially between Sispara and Walakkad. Counts were done in different times of the day, morning and evening. The results of the counts in each area was compiled into one set and the Shannon - Weaver species diversity index was calculated. The status of species are also analyzed and presented.

RESULT AND DISCUSSION

Birds

Altogether 1344 birds of 108 species were observed in the Silent Valley National Park (Appendix I) during 28-30 March 2000. The census was conducted in approximately 25km² covering six major areas, namely Sairandhri, Thondakulam, Neelikkal, Poochapara, Walakkad and Sispara. The data was compiled into three sets, Sairandhri, Poochapara-Neelikkal and Sispara-Walakkad as collected by the three teams. The counts were done in different habitats available in the above areas; semi-evergreen/ evergreen forest and savannah woodland around Sairandhri, semi-evergreen and moist deciduous forests at Neelikal, evergreen forests and grasslands at Poochapara, Although maximum area was covered within the short survey, the number of species

sighted was lower mainly because of the breeding season when many of the migrants had started leaving. Only 18% of the birds were migrants (Appendix I). A few breeding species such as the Black Bulbul, Small Sunbird, White-eye, Yellowbrowed Bulbul and Maroonbacked Imperial Pigeon dominated specific areas and hence, the number of birds counted was high. A few other species such as the Nilgiri Laughing Thrush, Scimitar Babbler and Whiterumped Spinetail Swift were also dominant in the Sispara - Walakkad region. Species such as Hill Myna, Redwhiskered Bulbul and Small Green Barbet were dominant in the Poochapara-Neelikkal region besides the first four species given in the total list (Appendix II). The Rufousbellied Munia was dominant only at Sairandhri besides other five species.

Silent Valley National Park with the vast expanse of the pristine wet evergreen forests supports most of the restricted range species or endemics of the Western Ghats. Of the 17 species of endemic birds in the Western Ghats, including one subspecies endemic (Ali & Ripley 1987), 14 species were recorded during this survey (Appendix I). The other endemics not sighted were the Greybreasted (Jerdon's) Laughing Thrush, Broadtailed Grass-warbler and Rufousbellied Shortwing; the first one does not occur in this area and the other two are rare but sighted earlier by Vijayan *et al.* (1992) and Bashir and Nameer (1993), both globally endangered and difficult to locate. The Nilgiri (Rufousbreasted) Laughing Thrush which is the only bird endemic to the Nilgiris was locally common in the undisturbed shola forests at Sispara. This species with its small range and population restricted to the montane shola forests in the Upper Nilgiris is listed as a globally endangered species (Vijayan in press) in the Red Data Book being published by the BirdLife International. The medium to high elevation evergreen forest between Sispara and Walakkad had the rare endemic Greyheaded Bulbul and the endangered endemic Nilgiri Wood Pigeon; around Neelikkal the rare endemic Wynaad Laughing Thrush was sighted. Another rare endemic Whitebellied Blue Flycatcher was occasionally found at the low to medium elevation evergreen forests at Neelikkal and Sairandhri.

The bird species diversity was high (beta diversity 3.56) in this National Park (table 1). When we take the different areas into consideration, the number of species sighted was not very different. The maximum number of species (54) was in the Poochapara-Neelikkal region while diversity was the highest (3.37) at Sairandhri as expected because this area has the large chunk of evergreen forest at low to medium elevation which is the most stable habitat. Low and medium elevation evergreen forests have higher diversity of birds than high elevation forests in the Nilgiri Biosphere Reserve (Vijayan *et al.* 1999). High elevation shola forests and grasslands have fewer species, but many of these are habitat specialist endemics such as the Nilgiri Laughing Thrush, Black and Orange Flycatcher and Nilgiri Pipit. Black Bird, though not an endemic was found mostly in this area.

Table 1. Bird community of the Silent Valley National Park						
Location No. of species No. of birds Species diversity Index (H						
Sairandhri	52	320	3.37			
Poochapara-Neelikkal	54	538	3.02			
Sispara-Walakkad	53	486	3.00			
Silent Valley Total	108	1344	3.56			

The number of species of birds observed was lower than that observed earlier in this area (189) by Vijayan et al. (1992) because that survey covered the adjacent areas in Mukkali, Attappady and Muthikulam ranges covering more diverse habitats and also extending to more days. Surveys by Vijayan in 1976-77 (KFRI 1977) resulted in only 100 species which might be because that survey focused more on mammals, especially the rare endemic Lion-tailed macaque. Jayson (1990) observed 119 species. The number of species observed by Pramod et al (1993) was much lower than the present census, only 89 in spite of covering moist deciduous and teak plantation outside the national park and evergreen forest inside and the censuses being from November to April; but the species diversity in the evergreen and moist deciduous forests were closer to that found by us. The pilot survey of birds in different habitats in the Silent Valley National Park by a team of people in December 1990 and by the two during March – May 1991 (Bashir & Nameer 1993) sighted 156 species including 30 migrants from the core area and another 36 from the buffer zone at Mukkali. Here more observers participated, covered different seasons including the peak migratory season having most of the migrants. The abundance of ground dwelling species such as thrushes was remarkably high in variety indicating a very productive and protected evergreen habitat with the least amount of disturbance. This was noted by the other studies also.

More intensive surveys are needed covering all the habitats in at least two seasons, winter and summer, in order to get a clear picture of the bird fauna of this National Park. Regular and periodic censuses of the birds along permanent transects would help in monitoring the bird population. Intensive studies on the rare endemic species should be taken up for understanding the biology and ecological requirements for the conservation and management of these species.

Other fauna

During this survey we found many butterflies including the endemic Southern Birdwing, Malabar treenymph. The endemic sipiny lizard *Sallea horsfieldi* inhabiting the shola forests of the Western Ghats was observed at Sispara. Wolf snake *Lycodon striatus*, Whipsnake *Ahaetulla perroteti* and Coral snake *Callophis* sp. were some of the snakes sighted by us. The endemic and endangered arboreal mammal, the Lion-tailed macaque was observed at five locations, namely Walakkad (two troops), Sairandhri (one) and in between Neelikkal and Poochapara (two). Earlier reports show the Silent Valley area as rich in the faunal diversity, especially insects (ZSI 1986); so also the herpetofauna with the endangered species such as Python, Monitor Lizard and some threatened and rare Caecilians (Unnikrishnan 1991). The smaller mammals such as some bats which are very rare have also been recorded from here. Endangered mammals, such as the Lion-tailed Macaque, Tiger and Panther and the rare Nilgiri Marten are present in this area besides all other animals of the Peninsular India.

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Sl. No	· Bird species	Status
1	Darter, Anhinga rufa	R
2	Little Cormorant, Phalacrocorax niger	R
3	Blackwinged Kite, Elanus caeruleus	R
4	Crested Honey Buzzard, Pernis ptilorhynchus	R
5	Pariah Kite, Milvus migrans	R
6	Brahminy Kite, Haliastur indus	R
7	Black Eagle, Ictinaetus malayensis	R
8	Crested Serpent Eagle, Spilornis cheela	R
9	Kestrel, Falco tinnunculus	R
10	Jungle Bush Quail, <i>Perdicula asiatica</i>	R
11	Painted Bush Quail, Perdicula erythrorhyncha	R
12	Red Spurfowl, <i>Galloperdix spadicea</i>	R
13	Grey Junglefowl, Gallus sonneratii	R
14	Common Green Pigeon, Treron phoenicoptera	R
15	Greyfronted Green Pigeon, Treron pompadora	R
16	Maroonbacked Imperial Pigeon, Ducula badia	R
10	Nilgiri Wood Pigeon, Columba elephinstonii	Е, Т
17	Emerald Dove, <i>Chalcophaps indica</i>	R R
10	Bluewinged Parakeet, <i>Psittacula columboides</i>	E
20	Lorikeet, Loriculus vernalis	R
20 21		R
21	Redwinged Crested Cuckoo, Clamator coromandus	R
	Indian Cuckoo, <i>Cuculus micropterus</i>	
23	Scops Owl, Otus scops	R
24	Edible-nest Swiftlet, Collocalia unicolor	R
25	Nightjar, <i>Caprimulgus</i> sp.	R
26	Brownthroated Spinetail Swift, Chaetura gigantea	R
27	Whiterumped Spinetail Swift, <i>Chaetura sylvatica</i>	R
28	Alpine Swift, Apus melba	M
29	House Swift, <i>Apus affinis</i>	R
30	Palm Swift, <i>Cypsiurus parous</i>	R
31	Malabar Trogon, Harpactes fasciatus	R
32	Blue-eared Kingfisher, Alcedo meninting	R
33	Chestnut-headed Bee-eater, Merops leschenaulti	R
34	Hoopoe, Upupa epops	R
35	Malabar Grey Hornbill, Tockus griseus	Е
36	Great Pied Hornbill, Buceros bicornis	R
37	Small Green Barbet, Megalaima viridis	R
38	Crimson-throated Barbet, Megalaima rubricapilla	Ε
39	Small Yellownaped Woodpecker, Picus chlorolophus	R
40	Goldenbacked Woodpecker, Dinopium benghalense	R
41	Goldenbacked Threetoed Woodpecker, Dinopium javanense	R
42	Woodpecker, Dinopium sp.	R
43	Malabar Heartspotted Woodpecker, Hemicircus canente	R
44	Indian Pitta, Pitta brachyura	М
45	Swallow, Hirundo sp.	М

Appendix I. Bird species observed in the Silent Valley National Park

Sl. No	· Bird species	Status
46	Blackheaded Oriole, Oriolus xanthornus	R
47	Grey Drongo, Dicrurus leucophaeus	Μ
48	Bronzed Drongo, Dicrurus aeneus	R
49	Large Racket-tailed Drongo, Dicrurus paradiseus	R
50	Hill Myna or Southern Grackle, Gracula religiosa	R
51	Tree Pie, Dendrocitta vagabunda	R
52	Southern Tree Pie, <i>Dendrocitta leucogastra</i>	Ε
53	Scarlet Minivet, Pericrocotus flammeus	R
54	Small Minivet, Pericrocotus cinnamomeus	R
55	Iora, Aegithina tiphia	R
56	Jerdon's Chloropsis, Chloropsis cochinchinensis.	R
57	Fairy Bluebird, Irena puella	R
58	Redwhiskered Bulbul, Pycnonotus jocosus	R
59	Redvented Bulbul, Pycnonotus cafer	R
60	Greyheaded Bulbul, Pycnonotus priocephalus	Е
61	Yellowbrowed Bulbul, Hypsipetes indicus	R
62	Black Bulbul, Hypsipetes madagascariensis	R
63	Spotted Babbler, Pellorneum ruficeps	R
64	Scimitar Babbler, Pomatorhinus schisticeps	R
65	Blackheaded Babbler, <i>Rhopocichla atriceps</i>	R
66	Rufous Babbler, <i>Turdoides subrufous</i>	E
67	Wynaad Laughing Thrush, Garrulax delesserti	Е
68	Nilgiri Laughing Thrush, Garrulax cachinnans	Е, Т
69	Quaker Babbler, Alcippe poioicephala	Ŕ
70	Brown Flycatcher, Muscicapa latirostris	R
71	Brownthroated Flycatcher, Muscicapa rubeculoides	М
72	Tickell's Blue Flycatcher, Muscicapa tickelliae	R
73	Black-and-Orange Flycatcher, Muscicapa nigrorufa	Е
74	Nilgiri Flycatcher, Muscicapa albicaudata	Е
75	Whitebellied Blue Flycatcher, Muscicapa pallipes	Е
76	Verditer Flycatcher, Muscicapa thalassina	М
77	Greyheaded Flycatcher, Culicicapa ceylonensis	R
78	Paradise Flycatcher, <i>Terpsiphone paradisi</i>	М
79	Thickbilled Warbler, Phragmaticola aedon	М
80	Blyth's Reed Warbler, Acrocephalus dumetorum	М
81	Tickell's Leaf Warbler, Phylloscopus affinis	М
82	Greenish Leaf Warbler, Phylloscopus trochiloides	М
83	Largebilled Leaf Warbler, Phylloscopus magnirostris	М
84	Chiffchaff, Phylloscopus collybita	М
85	Leaf Warbler, <i>Phylloscopus</i> sp.	М
86	Indian Blue Chat, Erithacus brunneus	М
87	Magpie-Robin, <i>Copsychus saularis</i>	R
88	Pied Bushchat, Saxicola caprata	R
89	Blueheaded Rock Thrush, Monticola cinclorhynchus	М
90	Malabar Whistling Thrush, Myiophoneus horsfieldii	R
91	Whitethroated Ground Thrush, Zoothera citrina cyanotus	R
92	Ground Thrush, Zoothera sp.	M?

Sl. No	Sl. No. Bird species Status			
93	Yellowcheeked Tit, Parus xanthogenis	R		
94	Bourdlillon's Blackbird, Turdus merula	R		
95	Velvetfronted Nuthatch, Sitta frontalis	R		
96	Brown Rock Pipit, Anthus similes	R		
97	Nilgiri Pipit, Anthus nilghiriensis	Е		
98	Yellow Wagtail, Motacilla falva	М		
99	Grey Wagtail, Motacilla caspica	М		
100	Tickell's Flowerpecker, Diceaum erythrorhynchos	R		
101	Niligiri Flowerpecker, Dicaeum concolor	R		
102	Flowerpecker, <i>Dicaeum</i> sp.	R		
103	Purplerumped Sunbird, Nectarinia zeylonica	R		
104	Small Sunbird, Nectarinia minima	Е		
105	Purple Sunbird, Nectarinia asiatica	R		
106	Sunbird, Nectarinia sp.	R		
107	White-eye, Zosterops palpebrosa	R		
108	Rufousbellied Munia, Lonchura kelaarti	R		

Sl. No	Species	# of birds
	<u>I. Sairandhri</u>	
1	Black Bulbul	26
2	Black Eagle	2
3	Blackheaded Babbler	5
4	Blueheaded Rock Thrush	1
5	Bluewinged Parakeet	7
6	Blyth's Reed Warbler	7
7	Bronzed Drongo	1
8	Brownthroated Flycatcher	1
9	Common Green Pigeon	5
10	Crested Serpent Eagle	2
11	Crimsonthroated Barbet	1
12	Emerald Dove	1
13	Fairy Bluebird	4
14	Goldenbacked Woodpecker	8
15	Greenish Leaf Warbler	2
16	Grey Junglefowl	7
17	Grey Wagtail	2
18	Greyfronted Green Pigeon	8
19	Heartspotted Woodpecker	1
20	Hill Myna	9
21	Indian Blue Chat	3
22	Jungle Bush Quail	1
23	Large Brownthroated Spinetail Swift	9
24	Largebilled Leaf Warbler	2
25	Lorikeet	1
26	Malabar Trogon	2
27	Malabar Whistling Thrush	2 5
28	Maroonbacked Imperial Pigeon	32
29	Nilgiri Flowerpecker	6
30	Painted Bush Quail	1
31	Paradise Flycatcher	3
32	Pitta	1
33	Purplerumped Sunbird	2
34	Quaker Babbler	2
35	Racket-tailed Drongo	9
36	Red Spurfowl	3
37	Redwhiskered Bulbul	12
38	Redwinged Crested Cuckoo	1
39	Rufous Babbler	4
40	Rufousbellied Munia	17
41	Scimitar Babbler	4
42	Small Green Barbet	23
43	Small Minivet	2
44	Small Sunbird	17

Appendix II. Birds counted in the Silent Valley National Park (March 2000)

Sl. No	Species		# of birds
45	Small Yellownaped Woodpecker		2
46	Southern Treepie		3
47	Thickbilled Warbler		1
48	Whitebellied Blue Flycatcher		1
49	White-eye		6
50	Whitethroated Ground Thrush		2
51	Yellowbrowed Bulbul		39
52	Yellowcheeked Tit		4
		Total	320
	II. Poochapara - Neelikkal		
1	Aipine Swift		6
2	Black Bird		2
3	Black Bulbul		102
4	Blackheaded Oriole		3
5	Blackwinged Kite		1
6	Blueheaded Rock Thrush		1
7	Brown Flycatcher		1
8	Brown Rock Pipit		2
9	Byth's Reed Warbler		1
10	Chestnutheaded Bee-eater		3
11	Crested Serpent Eagle		4
12	Darter		1
13	Dinopium Sp		3
14	Fairy Bluebird		16
15	Goldenbacked Woodpecker		1
16	Great Pied Hornbill		3
17	Grey Drongo		1
18	Grey Junglefowl		7
19	Grey Wagtail		1
20	Greyheaded Flycatcher		2
21	Ground Thrush		1
22	Hill Myna		42
23	Ноорое		3
24	House Swift		53
25	Little Cormorant		2
26	Lorikeet		7
27	Magpie Robin		2
28	Malabar Grey Hornbill		1
29	Malabar Whistling Thrush		5
30	Maroonbacked Imperial Pigeon		24
31	Nightjar		1
32	Nilgiri Flowerpecker		9
33	Palm Swift		2
34	Pariah Kite		- 1
35	Purplerumped Sunbird		2
36	Racket-tailed Drongo		8

01 N	0 :		
Sl. No	Species		# of birds
37	Redvented Bulbul		1
38	Redwhiskered Bulbul		35
39	Rufous Babbler		7
40	Scarlet Minivet		2 5
41	Scimitar Babbler		
42	Scops Owl		1
43	Small Green Barbet		26
44	Small Sunbird		74
45	Southern Treepie		8
46	Spotted Babbler		3
47	Tickell's Blue Flycatcher		1
48	Tickell's Flowerpecker		16
49	Velvetfronted Nuthatch		2
50	Warbler		1
51	Whitebellied Blue Flycatcher		6
52	White-eye		6
53	Wynaad Laughing Thrush		6
54	Yellowbrowed Bulbul		14
		Total	538
	<u>III. Sispara – Walakkad</u>		
1	Black & Orange Flycatcher		6
2	Black Bird		3
3	Black Bulbul		101
4	Black Eagle		2
5	Blackwinged Kite		1
6	Blue-eared Kingfisher		1
7	Byth's Reed Warbler		2
8	Chiffchaff		1
9	Common Swallow		5
10	Cuckoo		1
11	Edible-nest Swiftlet		4
12	Fairy Bluebird		2
13	Flowerpecker		4
14	Greenish Leaf Warbler		2
15	Grey Junglefowl		5
16	Grey Wagtail		1
17	Greyfronted Green Pigeon		5
18	Greyheaded Bulbul		1
19	Greyheaded Flycatcher		18
20	Honey Buzzard		1
21	Indian Blue Chat		2
22	Iora		1
23	Jerdon's Chloropsis		2
24	Kestrel		- 1
25	Largebilled Leaf Warbler		4
26	Leaf Warbler		1

Sl. No	Species		# of birds
27	Lorikeet		1
28	Malabar Whistling Thrush		5
29	Maroonbacked Imperial Pigeon		6
30	Nilgiri Flycatcher		7
31	Nilgiri Laughing Thrush		32
32	Nilgiri Pipit		2
33	Nilgiri Wood Pigeon		1
34	Pied Bush Chat		3
35	Purple Sunbird		1
36	Purplerumped Sunbird		1
37	Quaker Babbler		21
38	Red Spurfowl		2
39	Redwhiskered Bulbul		8
40	Scimitar Babbler		28
41	Small Green Barbet		10
42	Small Sunbird		2
43	Spotted Babbler		2
44	Swallow		21
45	Threetoed Woodpecker		21
46	Tickell's Leaf Warbler		4
47	Tree Pie		2
48	Velvetfronted Nuthatch		2
49	Verditer Flycatcher		1
50	White-eye		91
50 51	-		28
52	Whiterumped Spinetail Swift		28
52 53	Yellow Wagtail Yellowbrowed Bulbul		24
55	Tenowbrowed buibdi	Total	486
	Total for the National Park		
1	Aipine Swift		6
2	Black & Orange Flycatcher		6
3	Black Bird		5
4	Black Bulbul		229
5	Black Eagle		4
6	Blackheaded Babbler		5
7	Blackheaded Oriole		3
8	Blackwinged Kite		2
9	Blue-eared Kingfisher		1
9 10	Blueheaded Rock Thrush		2
10			7
	Bluewinged Parakeet		
12	Blyth's Reed Warbler		10
13	Bronzed Drongo Brown Elycontohor		1
14 15	Brown Flycatcher		1
15	Brown Rock Pipit		2
16 17	Brownthroated Flycatcher		1
17	Chestnutheaded Bee-eater		3

Sl. No	Species	# of birds
18	Chiffchaff	1
19	Common Green Pigeon	5
20	Common Swallow	5
21	Crested Serpent Eagle	6
22	Crimsonthroated Barbet	1
23	Cuckoo	1
24	Darter	1
25	Dinopium Sp	3
26	Edible-nest Swiftlet	4
27	Emerald Dove	1
28	Fairy Bluebird	22
29	Flowerpecker	4
30	Goldenbacked Threetoed Woodpecker	2
31	Goldenbacked Woodpecker	9
32	Great Pied Hornbill	3
33	Greenish Leaf Warbler	4
34	Grey Drongo	1
35	Grey Junglefowl	19
36	Grey Wagtail	4
37	Greyfronted Green Pigeon	13
38	Greyheaded Bulbul	1
39	Greyheaded Flycatcher	20
40	Ground Thrush	1
41	Heartspotted Woodpecker	1
42	Hill Myna	51
43	Honey Buzzard	1
44	Hoopoe	3
45	House Swift	53
46	Indian Blue Chat	5
47	Iora	1
48	Jerdon's Chloropsis	2
49	Jungle Bush Quail	1
50	Kestrel	1
51	Large Brownthroated Spinetail Swift	9
52	Largebilled Leaf Warbler	6
53	Leaf Warbler	2
54	Little Cormorant	2
55	Lorikeet	9
56	Magpie Robin	2
57	Malabar Grey Hornbill	1
58	Malabar Trogon	2
59	Malabar Whistling Thrush	15
60	Maroonbacked Imperial Pigeon	62
61	Nightjar	1
62	Nilgiri Flowerpecker	15
63	Nilgiri Flycatcher	7
64	Nilgiri Laughing Thrush	32

Sl. No	Species	:	# of birds
65	Nilgiri Pipit		2
66	Nilgiri Wood Pigeon		1
67	Painted Bush Quail		1
68	Palm Swift		2
69	Paradise Flycatcher		3
70	Pariah Kite		1
71	Pied Bush Chat		3
72	Pitta		1
73	Purple Sunbird		1
74	Purplerumped Sunbird		4
75	Quaker Babbler		23
76	Racket-tailed Drongo		17
77	Red Spurfowl		5
78	Redvented Bulbul		1
79	Redwhiskered Bulbul		55
80	Redwinged Crested Cuckoo		1
81	Rufous Babbler		11
82	Rufousbellied Munia		17
83	Scarlet Minivet		2
84	Scimitar Babbler		37
85	Scops Owl		1
86	Small Green Barbet		59
87	Small Minivet		2
88	Small Sunbird		93
89	Small Yellownaped Woodpecker		2
90	Southern Treepie		11
91	Spotted Babbler		5
92	Sunbird		1
93	Swallow		21
94	Thickbilled Warbler		1
95	Tickell's Blue Flycatcher		1
96	Tickell's Flowerpecker		16
97	Tickell's Leaf Warbler		4
98	Tree Pie		2
99	Velvetfronted Nuthatch		4
100	Verditer Flycatcher		1
101	Whitebellied Blue Flycatcher		7
102	White-eye		103
103	Whiterumped Spinetail Swift		28
104	Whitethroated Ground Thrush		2
105	Wynaad Laughing Thrush		6
106	Yellow Wagtail		2
107	Yellowbrowed Bulbul		77
108	Yellowcheeked Tit		4
		Total	1344