



## BIRDS OF MEGHAMALAI LANDSCAPE, SOUTHERN WESTERN GHATS, INDIA

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**Abstract:** Species composition of birds in the Meghamalai landscape with respect to threat status, foraging guild and biome-restricted assemblage were assessed based on data collected opportunistically during two research projects: first one spanned 36 months (2006–2009) the other for 18 months (June 2011–December 2012) and from literature published during mid 1940s. A total of 254 species belonging to 55 families and 18 orders were recorded, which include 11% (18 of 159 species) of globally threatened birds reported from India, 88% (14 of 16 species) of endemic birds of the Western Ghats and a higher proportion of biome-restricted species (56% of Indo-Malayan tropical dry zone and 80% of Indian Peninsula inhabited by tropical moist forest birds). Among the foraging guilds, insectivorous birds (51%) dominated the bird composition followed by frugivores and carnivores. The present data shows that Meghamalai deserves to be recognized as an Important Bird Area of International Bird Conservation Network. This would enhance the conservation prospects of the landscape in a long run. The present study also highlights the importance of the area for conserving the birds of the Western Ghats.

**Keywords:** Endemic birds, foraging guild, High Wavy Mountains, IBA, Theni forests.

Around 1340 bird species have hitherto been reported from India (Manakadan & Pittie 2001). As per IUCN (2012), 159 (12%) bird species of the country are globally threatened (16 Critically Endangered, 17 Endangered, 54 Vulnerable, 69 Near Threatened and three Data Deficient), and they are distributed in a wide range of eco-regions (Ali & Ripley 1983). The Western Ghats is one of the important eco-regions of India (Myers et al. 2000). It is a continuous mountain range (~1600 km in length and 1,60,000km<sup>2</sup> in area) along the western side of peninsular India, across six states, viz., Kerala, Tamil Nadu, Karnataka, Goa, Maharashtra and Gujarat. A large extent of this mountain stretch has been altered for raising commercial plantations such as tea, coffee, cardamom and orchids (Nair 1999). Wide variation

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अहो है हरियाली ।  
वहाँ है खुशहाली ।।



This article forms part of a special series on the Western Ghats of India, disseminating the results of work supported by the Critical Ecosystem Partnership Fund (CEPF), a joint initiative of l'Agence Française de Développement, Conservation International, the European Commission, the Global Environment Facility, the Government of Japan, the MacArthur Foundation and the World Bank. A fundamental goal of CEPF is to ensure civil society is engaged in biodiversity conservation. Implementation of the CEPF investment program in the Western Ghats is led and coordinated by the Ashoka Trust for Research in Ecology and the Environment (ATREE).

in elevation (up to 2695m in Anaimudi of Eravikulam National Park) and intensities of annual rainfall and pattern (rain-shadow and rain-fed found in the eastern and western side of plateau respectively) form diverse floral (dry thorn forests to tropical montane shola and grasslands) and faunal assemblages. The Western Ghats has been recognized as one of the eight hottest hotspots of global biodiversity for having a high degree of endemic animals/km<sup>2</sup> (Myers et al. 2000). Recently, 39 locations of the Ghats have been declared as World Heritage Sites by the UNESCO as an appreciation of their diverse and unique flora and fauna (Downloaded from <http://whc.unesco.org/en/list/1342/> on 23 July 2013). Daniels (2003) reported 508 bird species from the Western Ghats including 16 endemics, and BirdLife International has identified the Western Ghats as an Endemic Bird Area (Stattersfield 1998). Rasmussen & Anderton (2005) reported 26 endemic species from the Western Ghats, but this is currently being debated. In the present paper, we consider 16 species as endemic to the Western Ghats.

Critical Ecosystem Partnership Fund (CEPF) program has accredited the Western Ghats and site-specific locations therein as high priority sites for protecting highly threatened ecosystems (CEPF 2007). One such site-specific location is Meghamalai. In a conservation

perspective, the landscape acts as an important corridor linking Periyar Tiger Reserve and Grizzled Squirrel Wildlife Sanctuary.

Nichols (1944a,b; 1945) reported the occurrence of the birds of erstwhile Madura District including Meghamalai. After a lapse of over six decades, Bhupathy et al. (2012) collated some information on the birds of Meghamalai area. Subsequently, the first author while carrying out a CEPF-ATREE and Rufford Small Grant project systematically recorded birds of the area during June 2011–December 2012. The present study highlights the importance of the area for conserving birds in the Western Ghats.

### Materials and Methods

The Meghamalai landscape (9°31'–9°51'N & 77°10'–77°30'E; ~480km<sup>2</sup>) comes under the administrative control of the Theni Forest Division of Tamil Nadu State (Fig. 1). The area has been included under the Periyar-Agastiyamalai Corridor by Critical Ecosystem Partnership Fund (CEPF 2007). The major vegetation types include montane shola and grasslands, tropical wet evergreen, moist deciduous, dry deciduous forests, riparian and dry thorn forests, and economic crops (tea, coffee, cardamom etc) and plantations (softwood and hard wood). A major portion of the landscape receives precipitation from

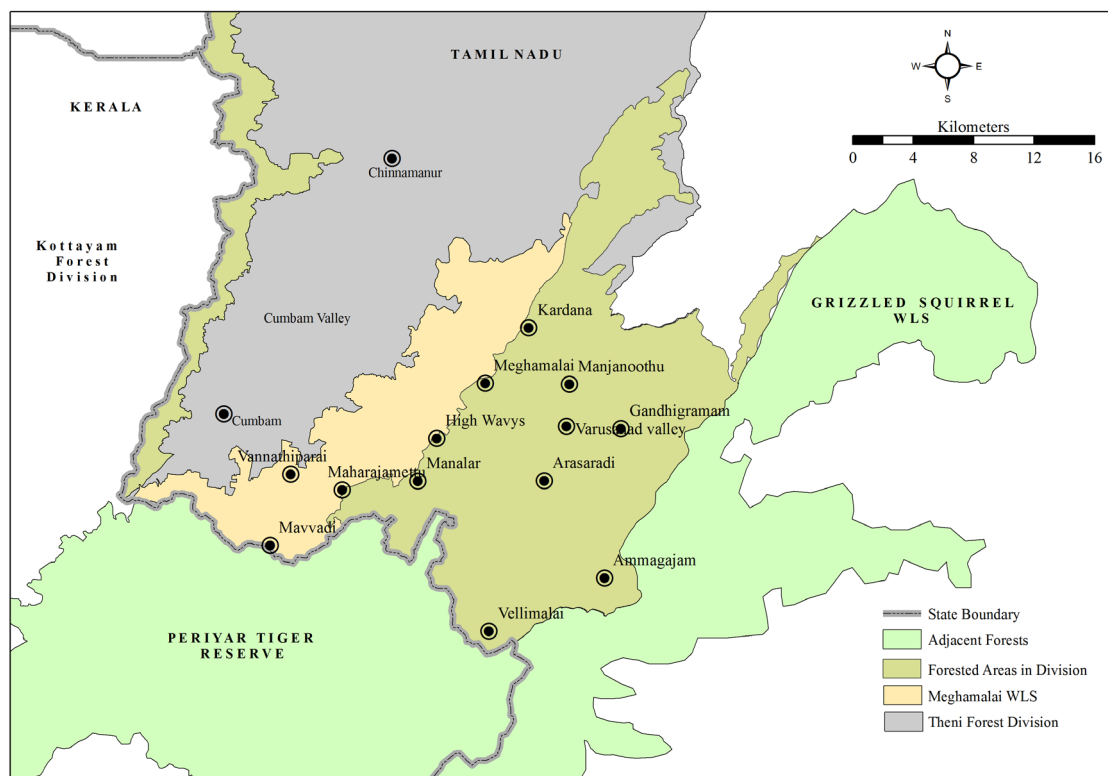


Figure 1. Surveyed areas in Meghamalai landscape, southern Western Ghats.

the north-east monsoon, but the plateaus (hill tops) receive higher rainfall during the south-west monsoon. The northern slope of the landscape has recently been declared as "Meghamalai Wildlife Sanctuary" (Tamil Nadu Government Gazette (2009).

The occurrence of birds in the area was opportunistically recorded during field work by Sálím Ali Centre for Ornithology Natural History (2006–2009) and Wildlife Information Liaison Development Society (2011–2012). In addition, we also collated secondary data from published works (Nichols 1944a,b, 1945; Biddulph 1956). The nomenclature and details on distribution status (resident, resident migrant, migrants), endemism and feeding guild (aquatic vegetarian, granivore, frugivore, piscivore, carnivore, omnivore and nectarivore) were gleaned from Ali & Ripley (1983). Threat status of each species observed/reported from the landscape was extracted from IUCN Red List (IUCN 2012). Biome-restricted assemblages of birds were categorized following (Islam & Rahmani 2004).

## Results

In total, 254 bird species belonging to 55 families and 18 orders were recorded in Meghamalai (Table 1), which consist of 10 migratory, 53 resident migratory and 191 resident species. This works out to be 19% of the bird fauna of India. Fourteen of them are endemic to the Western Ghats. Considerable populations of the Grey-breasted Laughingthrush *Garrulax jerdoni* (6 individuals/km in tea estates), Malabar Grey Hornbill *Ocyrceros griseus* (flocks with over 30 individuals) and White-bellied Shortwing *Brachypteryx major* (0.8 individuals/km in tea estates) were found. Out of 55 families, Muscicapidae (47 species) had the highest representation of species followed by Accipitridae (19) and Columbidae (12).

In all, 199 species of birds were added during recent studies and 23 recorded only in the past (1944–45). The Red-faced Malkoha *Phaenicophaeus pyrrhocephalus* could not be located during recent studies. Around 50% and 19% of species reported from the Western Ghats and India were recorded from Meghamalai respectively. Coraciiformes recorded from Meghamalai accounted for 46% of species reported to occur in India followed by Cuculiformes (42%) and Ciconiiformes (40%).

All (14 species) endemics excluding Small Sunbird *Nectarinia minima*, Blue-winged Parakeet *Psittacula columboides*, Malabar Grey Hornbill and Grey-headed Bulbul *Pycnonotus priocephalus* were observed in upper reaches (<1000m) forests. White-bellied Treepie *Dendrocitta leucogastra* was commonly observed in the coffee estates of Vellimalai and northwestern sides of

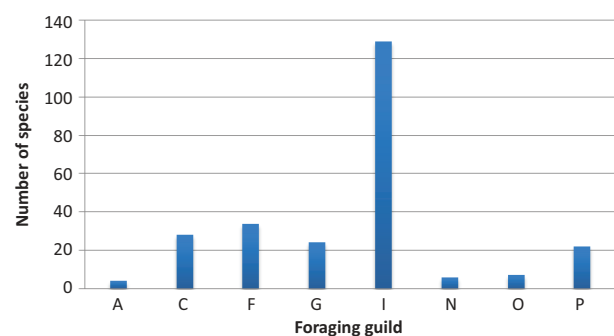
Varusanad Hills. Black-and-Orange Flycatcher *Ficedula nigrorufa* was recorded infrequently in Vellimalai and Manalar estates. Grey-breasted Laughingthrush was one of the most common species in the high elevations and a notable number were seen in Meghamalai Mountains, which starts from Gardana Estate in the east to Upper Manalar in the west. Nilgiri Pipit *Anthus nilghiriensis* and Broad-tailed Grass-Warbler *Schoenicola platyura* were seldom observed in grasslands between Maharaja Mettu and Mavadi Estate. Nilgiri Wood-Pigeon *Columba elphinstonii* was observed in the upper elevation (i.e., >1000m) wet evergreen tracts of Upper Manalar and Vellimalai Estates.

Forty (15.7%) species of birds recorded in the landscape were wetland associated while 214 species were forest dependent. Insectivores dominated the bird assemblage (130 species, 51%) followed by frugivores (34 species, 13%) and carnivores (28 species, 11%). Aquatic (herbivores) and nectarivores contributed the least (each 5 species, Fig. 2).

In all, 18 globally threatened birds were recorded from this landscape and included the Critically Endangered Long-billed Vulture *Gyps indicus*; and White-bellied Shortwing; Vulnerable Broad-tailed Grass-Warbler *Schoenicola platyura*, Yellow-throated Bulbul *Pycnonotus xantholaemus*, Nilgiri Pipit *Anthus nilghiriensis* and Nilgiri Wood-pigeon and 11 Near Threatened species (Fig. 3). Out of the 11 Near Threatened, four were aquatic while the other seven were terrestrial species. Among the threatened species of the area, Long-billed Vulture and Grey-headed Fish-Eagle (Lesser/Greater) were historical reports.

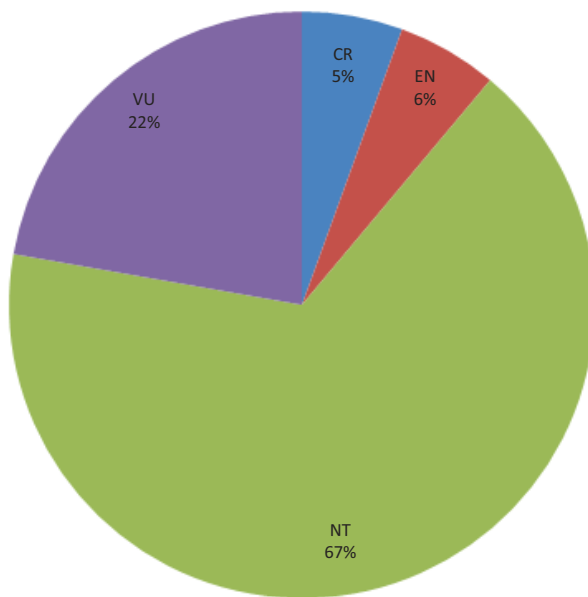
## Discussion

Species richness of birds and number of endemics recorded in Meghamalai landscape is comparable to



**Figure 2. Composition of birds belonging to various foraging guilds in Meghamalai landscape.**

I - Insectivores, N - Nectarivores, O - Omnivores, P - Piscivores, A - Aquatic (herbivores), C - Carnivores, F - Frugivores, G - Granivores



**Figure 3. Composition of threatened birds in Meghamalai as per IUCN criteria.**

NT - Near Threatened, VU - Vulnerable, EN - Endangered, CR - Critically Endangered

other forest areas located largely on the leeward side of the southern Western Ghats such as the Mudumalai Wildlife Sanctuary (266 species, nine endemics; Gokula & Vijayan 1996), Palni Hills (277 species, 13 endemics; Balachandran et al. 2005), Anamalai Tiger Reserve (218 species, 12 endemics; Kannan 1998), Kalakkad-Mundanthurai Tiger Reserve (273 species 15 endemics; Johnsingh 2001) and Grizzled Squirrel Wildlife Sanctuary (220 species, 14 endemics; Islam & Rahmani 2004). Vegetation composition, altitudinal gradient of the above areas, and sampling efforts in previous studies were different compared to the present study. The record of 254 species in the landscape is around 50% of 508 recorded birds of the Western Ghats. It is to be noted that the present bird list of Meghamalai is incomplete and further intensive studies would add more species.

High species richness of birds in the landscape could be attributed to terrain (wide altitudinal gradient: 200–2000 m), rainfall pattern (leeward and windward zones) and vegetation characteristics (highly mosaic habitats under different disturbance levels). Further, diverse order and family representations of birds in the area indicate the availability of diverse and abundant food resources, which is an important factor determining the community structure (Recher & Davis 2002).

One vulture species (Long-billed Vulture *Gyps indicus*) has been reported during the 1940s from the erstwhile Madura District (Nichols 1944a,b, 1945), however,

recent surveys were unsuccessful in locating the same. The dramatic decline of *Gyps* vultures in the Indian subcontinent has been reported by Prakash et al. (2012). Twenty species of birds reported by Nichols (1944a,b, 1945;) were not recorded all in recent surveys (2006–2012; Table 1). This could be due to the disappearance of species such as vultures from the area. Furthermore, one carnivorous, four granivorous, 12 insectivorous and three piscivorous birds reported earlier were also not recorded during recent studies (Table 1). Endemic species, Grey-breasted Laughing-thrush, Nilgiri-Wood Pigeon, Nilgiri Pipit and Nilgiri Flycatcher, recorded during the present studies were not reported earlier. Incomplete spatial and temporal coverage in these surveys and habitat changes due to plantations, and other anthropogenic activities over the years might have caused these variations. This indicates our incomplete understanding on the bird fauna of Meghamalai. The only sight record of Red-faced Malkoha *Phaenicophaeus pyrrhocephalus* is reported from low elevation forests of Meghamalai (Biddulph 1956). However, Hoffmann (1996) reported this as a spurious record. Furthermore, this species was not observed during the recent studies.

The high proportion of endemics in this area is accredited to the large extent of high elevation (<1400m) forests, south of Anamalais (see Bhupathy & Babu 2013). High elevation forests are reported to harbor relatively larger number of endemics in the Western Ghats. Furthermore contiguous patches of evergreen forests still persist on the western side of the landscape, where it merges with Periyar Tiger Reserve. With respect to feeding guilds, insectivores dominated the bird composition of Meghamalai followed by frugivore and carnivores. A similar pattern of guild structure was observed in Mudumalai Wildlife Sanctuary (Gokula & Vijayan 1996), Palni Hills (Somasundaram & Vijayan 2008), Mundanthurai plateau (Johnsingh & Joshua 1994) and Anaikatty (Nirmala 2002) of Western Ghats. Representation of major foraging guilds in the area indicated that the area holds wide food resources.

The high degree of globally threatened (18 species = 11% of India's threatened birds), range restricted (14 species = 88% of Western Ghats endemics) and biome-restricted species (i.e., 33 species (56%) of 59 species of Indo-Malayan tropical dry zone and 12 of 15 species (80%) of Indian peninsula tropical moist forest) in Meghamalai fulfill criteria set for recognizing a location as an Important Bird Area (IBA; Islam & Rahmani 2004). Recognition of Meghamalai as one of the IBAs of the country would pave the way for further conservation initiatives in the landscape for wildlife, especially birds.

Table 1. Checklist of birds recorded in Meghamalai landscape, southern Western Ghats, India. Names after Manakadan &amp; Pitte (2001).

Family / Common Name	Scientific Name	IUCN	Status	Guild	Source
Podicipedidae					
Little Grebe	<i>Tachybaptus ruficollis</i>	LC	R	P	2,3
Pelecanidae					
Spot-billed Pelican	<i>Pelecanus philippensis</i>	NT	RM	P	3
Phalacrocoracidae					
Little Cormorant	<i>Phalacrocorax niger</i>	LC	RM	P	1,2,3
Indian Shag	<i>Phalacrocorax fuscicollis</i>	LC	RM	P	3
Anhingidae					
Darter	<i>Anhinga melanogaster</i>	NT	RM	P	3
Ardeidae					
Purple Heron	<i>Ardea purpurea</i>	LC	RM	P	1,3
Grey Heron	<i>Ardea cinerea</i>	LC	RM	P	3
Large Egret	<i>Casmerodius albus</i>	LC	RM	P	3
Cattle Egret	<i>Bubulcus ibis</i>	LC	RM	P	2,3
Yellow Bittern	<i>Ixobrychus sinensis</i>	LC	RM	P	1
Chestnut Bittern	<i>Ixobrychus cinnamomeus</i>	LC	RM	P	1
Little Egret	<i>Egretta garzetta</i>	LC	R	P	2,3
Indian Pond-Heron	<i>Ardeola grayii</i>	LC	R	P	2,3
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	LC	R	P	1,2
Ciconiidae					
Painted Stork	<i>Mycteria leucocephala</i>	NT	RM	P	3
Asian Openbill-Stork	<i>Anastomus oscitans</i>	LC	R	I	3
White-necked Stork	<i>Ciconia episcopus</i>	LC	R	P	3
Threskiornithidae					
Oriental White Ibis	<i>Threskiornis melanocephalus</i>	NT	R	I	3
Black Ibis	<i>Pseudibis papillosa</i>	LC	R	I	3
Anatidae					
Lesser Whistling-Duck	<i>Dendrocygna javanica</i>	LC	R	A	3
Spot-billed Duck	<i>Anas poecilorhyncha</i>	LC	RM	A	3
Accipitridae					
Black Baza	<i>Aviceda leuphotes</i>	LC	RM	C	3
Oriental Honey-Buzzard	<i>Pernis ptilorhynchus</i>	LC	RM	C	1,2,3
Pallid Harrier	<i>Circus macrourus</i>	NT	M	C	2
Montagu's Harrier	<i>Circus pygargus</i>	LC	M	C	2
Eurasian Sparrowhawk	<i>Accipiter nisus</i>	LC	RM	C	2

Family / Common Name	Scientific Name	IUCN	Status	Guild	Source
Jerdon's Baza	<i>Aviceda jerdoni</i>	LC	R	C	2
Black-shouldered Kite	<i>Elanus caeruleus</i>	LC	R	C	2,3
Black Kite	<i>Milvus migrans</i>	LC	R	O	2,3
Brahminy Kite	<i>Haliastur indus</i>	LC	R	O	2,3
Grey-headed Fish-Eagle (Lesser/Greater)	<i>Ichthyophaga ichthyaetus / I. humilis</i>	NT	R	P	1
Short-toed Snake-Eagle	<i>Circaetus gallicus</i>	LC	R	C	3
Long-billed Vulture	<i>Gyps indicus</i>	CR	R	C	1
Crested Serpent-Eagle	<i>Spilornis cheela</i>	LC	R	C	2,3
Black Eagle	<i>Ictinaetus malayensis</i>	LC	R	C	4
Booted Eagle	<i>Hieraaetus pennatus</i>	LC	RM	C	4
Shikra	<i>Accipiter badius</i>	LC	R	C	1,2,3
Changeable Hawk-Eagle	<i>Spizaetus cirrhatius</i>	LC	R	C	2
Rufous-bellied Eagle	<i>Hieraaetus kienerii</i>	LC	R	C	1
Falconidae					
Common Kestrel	<i>Falco tinnunculus</i>	LC	RM	C	2,3
Red-headed Falcon	<i>Falco chicquera</i>	LC	R	C	2
Phasianidae					
Rain Quail	<i>Coturnix coromandelica</i>	LC	RM	G	2
Grey Francolin	<i>Francolinus pondicerianus</i>	LC	R	G	3
Jungle Bush-Quail	<i>Perdica asiatica</i>	LC	R	G	3
Blue-breasted Quail	<i>Coturnix chinensis</i>	LC	R	G	1
Red Spurfowl	<i>Galloperdix spadicea</i>	LC	R	G	2,3
Grey Junglefowl	<i>Gallus sonneratii</i>	LC	R	G	2,3
Indian Peafowl	<i>Pavo cristatus</i>	LC	R	G	2,3
Turnicidae					
Common Buttonquail	<i>Turnix suscitator</i>	LC	R	G	1
Rallidae					
Slaty-legged Crake	<i>Rallina eurizonoides</i>	LC	RM	I	1
Ruddy-breasted Crake	<i>Porzana fusca</i>	LC	R	I	1
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	LC	R	I	3
Purple Moorhen	<i>Porphyrio porphyrio</i>	LC	R	A	3
Jacaniidae					
Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>	LC	R	A	3

Family / Common Name	Scientific Name	IUCN	Status	Guild	Source
Rostratulidae					
Greater Painted-Snipe	<i>Rostratula benghalensis</i>	LC	R	G	1
Charadriidae					
Yellow-wattled Lapwing	<i>Vanellus malabaricus</i>	LC	R	I	3
Red-wattled Lapwing	<i>Vanellus indicus</i>	LC	R	I	2,3
Scolopacidae					
Common Sandpiper	<i>Actitis hypoleucos</i>	LC	RM	I	1,3
Pteroclididae					
Chestnut-bellied Sandgrouse	<i>Pterocles exustus</i>	LC	R	G	1
Columbidae					
Blue Rock Pigeon	<i>Columba livia</i>	LC	R	G	2,3
Nilgiri Wood-Pigeon	<i>Columba elphinstonii</i> *	VU	R	F	3
Oriental Turtle Dove	<i>Streptopelia orientalis</i>	LC	RM	G	4
Little Brown Dove	<i>Streptopelia senegalensis</i>	LC	R	G	2,3
Spotted Dove	<i>Streptopelia chinensis</i>	LC	R	G	2,3
Eurasian Collared-Dove	<i>Streptopelia decaocto</i>	LC	R	G	2,3
Emerald Dove	<i>Chalcophaps indica</i>	LC	R	G	2,3
Orange-breasted Green-Pigeon	<i>Treron bicincta</i>	LC	R	F	3
Pompador Green-Pigeon	<i>Treron pompadora</i>	LC	R	F	1,3
Yellow-legged Green-Pigeon	<i>Treron phoenicoptera</i>	LC	R	F	3
Green Imperial-Pigeon	<i>Ducula aenea</i>	LC	R	F	1,3
Mountain Imperial-Pigeon	<i>Ducula badia</i>	LC	R	F	3
Psittacidae					
Rose-ringed Parakeet	<i>Psittacula krameri</i>	LC	R	F	2,3
Indian Hanging-Parrot	<i>Loriculus vernalis</i>	LC	R	F	2,3
Plum-headed Parakeet	<i>Psittacula cyanocephala</i>	LC	R	F	2,3
Blue-winged Parakeet	<i>Psittacula columboides</i> *	LC	R	G	2,3
Cuculidae					
Pied Crested Cuckoo	<i>Clamator jacobinus</i>	LC	RM	I	2,3
Common Cuckoo	<i>Cuculus canorus</i>	LC	RM	I	3
Banded Bay Cuckoo	<i>Cacomantis sonneratii</i>	LC	R	I	3
Asian Koel	<i>Eudynamis scolopacea</i>	LC	R	I	2,3
Brainfever Bird	<i>Hierococyx varius</i>	LC	R	I	2,3

Family / Common Name	Scientific Name	IUCN	Status	Guild	Source
Indian Plaintive Cuckoo	<i>Cacomantis passerinus</i>	LC	R	I	3
Drongo Cuckoo	<i>Surniculus lugubris</i>	LC	R	I	3
Small Green-billed Malkoha	<i>Phaenicophaeus viridirostris</i>	LC	R	I	2,3
Sirkeer Malkoha	<i>Phaenicophaeus leschenaultii</i>	LC	R	I	2,3
Greater Coucal	<i>Centropus sinensis</i>	LC	R	I	2,3
Tytonidae					
Barn Owl	<i>Tyto alba</i>	LC	R	C	2,3
Strigidae					
Forest Eagle-Owl	<i>Bubo nipalensis</i>	LC	R	C	1,2,3
Oriental Scops-Owl	<i>Otus sunia</i>	LC	R	C	2,3
Eurasian Eagle-Owl	<i>Bubo bubo</i>	LC	R	C	2,3
Collared Scops-Owl	<i>Otus bakkamoena</i>	LC	R	C	2,3
Brown Fish-Owl	<i>Ketupa zeylonensis</i>	LC	R	C	3
Mottled Wood-Owl	<i>Strix ocellata</i>	LC	R	C	2,3
Brown Wood-Owl	<i>Strix leptogrammica</i>	LC	R	C	1,3
Jungle Owlet	<i>Glaucidium radiatum</i>	LC	R	C	2,3
Spotted Owlet	<i>Athene brama</i>	LC	R	C	2,3
Brown Hawk-Owl	<i>Ninox scutulata</i>	LC	R	C	1,3
Caprimulgidae					
Indian Jungle Nightjar	<i>Caprimulgus indicus</i>	LC	RM	I	2,3
Jerdon's Nightjar	<i>Caprimulgus atripennis</i>	LC	RM	I	1
Common Indian Nightjar	<i>Caprimulgus asiaticus</i>	LC	R	I	2,3
Apodidae					
Indian Edible-nest Swiftlet	<i>Collocalia unicolor</i>	LC	R	I	4
House Swift	<i>Apus affinis</i>	LC	RM	I	3
Asian Palm-Swift	<i>Cypsiurus balasiensis</i>	LC	R	I	3
Trogonidae					
Malabar Trogon	<i>Harpactes fasciatus</i>	LC	R	I	2,3
Alcedinidae					
Small Blue Kingfisher	<i>Alcedo atthis</i>	LC	RM	P	2,3
Black-capped Kingfisher	<i>Halcyon pileata</i>	LC	R	P	3
White-breasted Kingfisher	<i>Halcyon smyrnensis</i>	LC	R	P	2,3
Stork-billed Kingfisher	<i>Halcyon capensis</i>	LC	R	P	1
Lesser Pied Kingfisher	<i>Ceryle rudis</i>	LC	R	P	3
Meropidae					
Blue-tailed Bee-eater	<i>Merops philippinus</i>	LC	RM	I	1,2

Family / Common Name	Scientific Name	IUCN	Status	Guild	Source
Blue-bearded Bee-eater	<i>Nyctornis athertoni</i>	LC	R	I	3
Small Bee-eater	<i>Merops orientalis</i>	LC	R	I	2,3
Chestnut-headed Bee-eater	<i>Merops leschenaulti</i>	LC	R	I	2,3
Coraciidae					
Indian Roller	<i>Coracias benghalensis</i>	LC	RM	I	2,3
Upupidae					
Common Hoopoe	<i>Upupa epops</i>	LC	RM	I	2,3
Bucerotidae					
Malabar Pied Hornbill	<i>Anthracoceros coronatus</i>	NT	R	F	2
Great Pied Hornbill (Image 1)	<i>Buceros bicornis</i>	NT	R	F	1,2,3
Indian Grey Hornbill	<i>Ocyrceros birostris</i>	LC	R	F	2
Malabar Grey Hornbill	<i>Ocyrceros griseus</i> *	LC	R	F	2,3
Capitonidae					
White-cheeked Barbet	<i>Megalaima viridis</i>	LC	R	F	1,2,3
Brown-headed Barbet	<i>Megalaima zeylanica</i>	LC	R	F	2,3
Crimson-throated Barbet	<i>Megalaima rubricapillus</i>	LC	R	F	2,3
Coppersmith Barbet	<i>Megalaima haemacephala</i>	LC	R	F	2,3
Picidae					
Rufous Woodpecker	<i>Celeus brachyurus</i>	LC	R	I	1,2
Brown-capped Pygmy Woodpecker	<i>Dendrocopos nanus</i>	LC	R	I	3,4
Yellow-fronted Pied Woodpecker	<i>Dendrocopos mahrattensis</i>	LC	R	I	4
Little Scaly-bellied Green Woodpecker	<i>Picus xanthopygaeus</i>	LC	R	I	3
Small Yellow-naped Woodpecker	<i>Picus chlorolophus</i>	LC	R	I	1
Common Golden-backed Woodpecker	<i>Dinopium javanense</i>	LC	R	I	3,4
Lesser Golden-backed Woodpecker	<i>Dinopium benghalense</i>	LC	R	I	1,2,3
Heart-spotted Woodpecker	<i>Hemicircus canente</i>	LC	R	I	1,3
Black-shouldered Woodpecker	<i>Chrysocolaptes festivus</i>	LC	R	I	1
Pittidae					
Indian Pitta	<i>Pitta brachyura</i>	LC	R	I	1,2,3
Alaudidae					
Ashy-crowned Sparrow-Lark	<i>Eremopterix grisea</i>	LC	R	I	2

Family / Common Name	Scientific Name	IUCN	Status	Guild	Source
Jerdon's Bush-Lark	<i>Mirafraga affinis</i>	LC	R	I	1
Rufous-tailed Finch-Lark	<i>Ammomanes phoenicurus</i>	LC	R	I	2
Malabar Crested Lark	<i>Galerida malabarica</i>	LC	R	I	2
Eastern Skylark	<i>Alauda gulgula</i>	LC	R	I	1
Hirundinidae					
Dusky Crag-Martin	<i>Hirundo concolor</i>	LC	R	I	4
House Swallow	<i>Hirundo tahitica</i>	LC	R	I	4
Red-rumped Swallow	<i>Hirundo daurica</i>	LC	RM	I	3
Common Swallow	<i>Hirundo rustica</i>	LC	RM	I	2
Wire-tailed Swallow	<i>Hirundo smithii</i>	LC	R	I	3
Motacillidae					
Forest Wagtail	<i>Dendronanthus indicus</i>	LC	RM	I	1,2,3
Yellow Wagtail	<i>Motacilla flava</i>	LC	RM	I	3
White Wagtail	<i>Motacilla alba</i>	LC	RM	F	2
Grey Wagtail	<i>Motacilla cinerea</i>	LC	M	I	2,3
Large Pied Wagtail	<i>Motacilla maderaspatensis</i>	LC	R	I	3
Paddyfield Pipit	<i>Anthus rufulus</i>	LC	R	I	3
Nilgiri Pipit	<i>Anthus nilghiriensis</i> *	VU	R	I	3
Campephagidae					
Black-headed Cuckoo-Shrike	<i>Coracina melanoptera</i>	LC	RM	I	2,3
Pied Flycatcher-Shrike	<i>Hemipus picatus</i>	LC	R	I	3
Large Cuckoo-Shrike	<i>Coracina macei</i>	LC	R	I	3
Scarlet Minivet	<i>Pericrocotus flammeus</i>	LC	R	I	2,3
Large Woodshrike	<i>Tephrodornis gularis</i>	LC	R	I	4
Common Woodshrike	<i>Tephrodornis pondicerianus</i>	LC	R	I	2,3
Pycnonotidae					
Black Bulbul	<i>Hypsipetes leucocephalus</i>	LC	R	F	3
Black-crested Bulbul	<i>Pycnonotus melanicterus</i>	LC	R	F	2,3
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	LC	R	F	2,3
White-browed Bulbul	<i>Pycnonotus luteolus</i>	LC	R	F	3
Red-vented Bulbul	<i>Pycnonotus cafer</i>	LC	R	F	2,3
Yellow-browed Bulbul	<i>Iole indica</i>	LC	R	F	2,3
Grey-headed Bulbul	<i>Pycnonotus priocephalus</i> *	NT	R	F	2,3
Yellow-throated Bulbul	<i>Pycnonotus xantholaemus</i>	VU	R	F	2

Family / Common Name	Scientific Name	IUCN	Status	Guild	Source
Irenidae					
Common Iora	<i>Aegithina tiphia</i>	LC	R	I	2,3
Asian Fairy-Bluebird	<i>Irena puella</i>	LC	R	F	2,3
Jerdon's Chloropsis	<i>Chloropsis cochinchinensis</i>	LC	R	I	2,3
Gold-fronted Chloropsis	<i>Chloropsis aurifrons</i>	LC	R	I	3
Laniidae					
Brown Shrike	<i>Lanius cristatus</i>	LC	M	I	2,3
Southern Grey Shrike (?)	<i>Lanius meridionalis</i>	LC	RM	I	3
Rufous-backed Shrike	<i>Lanius schach</i>	LC	R	I	2,3
Bay-backed Shrike	<i>Lanius vittatus</i>	LC	R	I	2,3
Muscicapidae					
Blue-headed Rock-Thrush	<i>Monticola cinclorhynchus</i>	LC	RM	I	1,2
Blue Rock-Thrush	<i>Monticola solitarius</i>	LC	RM	I	3
Indian Blue Robin	<i>Luscinia brunnea</i>	LC	RM	I	1,3
Scaly Thrush	<i>Zoothera dauma</i>	LC	RM	I	1
Oriental Magpie-Robin	<i>Copsychus saularis</i>	LC	R	I	2,3
Orange-headed Thrush	<i>Zoothera citrina</i>	LC	R	I	3
White-rumped Shama	<i>Copsychus malabaricus</i>	LC	R	I	2,3
Malabar Whistling-Thrush (Image 2)	<i>Myiophonus horsfieldii</i>	LC	R	I	1,2,3
Indian Robin	<i>Saxicoloides fulicata</i>	LC	R	I	2,3
Pied Bushchat	<i>Saxicola caprata</i>	LC	R	I	2,3
White-bellied Shortwing (Image 3)	<i>Brachypteryx major*</i>	EN	R	I	2,3
Spotted Babbler	<i>Pellorneum ruficeps</i>	LC	R	I	2,3
Indian Scimitar-Babbler	<i>Pomatorhinus horsfieldii</i>	LC	R	I	2,3
Yellow-eyed Babbler	<i>Chrysomma sinense</i>	LC	R	I	3
Common Babbler	<i>Turdoides caudatus</i>	LC	R	I	1,2
Rufous-bellied Babbler	<i>Dumetia hyperythra</i>	LC	R	I	3
Jungle Babbler	<i>Turdoides striatus</i>	LC	R	I	2,3
Black-headed Babbler	<i>Rhopocichla atriceps</i>	LC	R	I	3
Large Grey Babbler	<i>Turdoides malcolmi</i>	LC	R	I	3
White-headed Babbler	<i>Turdoides affinis</i>	LC	R	I	3
Quaker Tit-Babbler	<i>Alcippe poiocephala</i>	LC	R	I	1,3
Jungle Prinia	<i>Prinia sylvatica</i>	LC	R	I	4
Grey-breasted Laughingthrush	<i>Garrulax jerdoni *</i>	NT	R	I	3

Family / Common Name	Scientific Name	IUCN	Status	Guild	Source
Indian Rufous Babbler	<i>Turdoides subrufus *</i>	LC	R	I	1,3
Greenish Leaf-Warbler	<i>Phylloscopus trochiloides</i>	LC	M	I	3
Large-billed Leaf-Warbler	<i>Phylloscopus magnirostris</i>	LC	M	I	1,3
Blyth's Reed-Warbler	<i>Acrocephalus dumetorum</i>	LC	RM	I	2,3
Western Crowned Warbler	<i>Phylloscopus occipitalis</i>	LC	RM	I	1
Ashy Prinia	<i>Prinia socialis</i>	LC	R	I	2,3
Streaked Fantail-Warbler	<i>Cisticola juncidis</i>	LC	R	I	1
Indian Great Reed-Warbler	<i>Acrocephalus stentoreus</i>	LC	R	I	3
Common Tailorbird	<i>Orthotomus sutorius</i>	LC	R	I	2,3
Broad-tailed Grass-Warbler	<i>Schoenicola platyura *</i>	VU	R	I	1,3
Hume's Lesser Whitethroat	<i>Sylvia althaea</i>	LC	M	I	4
Orphean Warbler	<i>Sylvia hortensis</i>	LC	M	I	1
Verditer Flycatcher	<i>Eumyias thalassina</i>	LC	RM	I	2,3
Asian Brown Flycatcher	<i>Muscicapa dauurica</i>	LC	RM	I	2,3
Brown-breasted Flycatcher	<i>Muscicapa muttui</i>	LC	RM	I	3
Rusty-tailed Flycatcher	<i>Muscicapa ruficauda</i>	LC	M	I	1
Grey-headed Flycatcher	<i>Culicicapa ceylonensis</i>	LC	R	I	2,3
Tickell's Blue-Flycatcher	<i>Cyornis tickelliae</i>	LC	R	I	2,3
Black-and-Orange Flycatcher (Image 4)	<i>Ficedula nigrorufa *</i>	NT	R	I	2,3
Nilgiri Flycatcher	<i>Eumyias albicaudata *</i>	NT	R	I	3
White-bellied Blue-Flycatcher (Image 5)	<i>Cyornis pallipes *</i>	LC	R	I	1,2,3
Asian Paradise-Flycatcher	<i>Terpsiphone paradisi</i>	LC	RM	I	2,3
Black-naped Monarch-Flycatcher	<i>Hypothymis azurea</i>	LC	R	I	2,3
White-browed Fantail-Flycatcher	<i>Rhipidura aureola</i>	LC	R	I	2
Paridae					
Black-lored Yellow Tit	<i>Parus xanthogenys</i>	LC	R	I	3
Great Tit	<i>Parus major</i>	LC	R	I	2,3
Sittidae					
Velvet-fronted Nuthatch	<i>Sitta frontalis</i>	LC	R	I	2,3
Dicaeidae					



Family / Common Name	Scientific Name	IUCN	Status	Guild	Source
Thick-billed Flowerpecker	<i>Dicaeum agile</i>	LC	R	N	3
Plain Flowerpecker	<i>Dicaeum concolor</i>	LC	R	N	3
Nectariniidae					
Purple-rumped Sunbird	<i>Nectarinia zeylonica</i>	LC	R	N	2,3
Purple Sunbird	<i>Nectarinia asiatica</i>	LC	R	N	3
Loten's Sunbird	<i>Nectarinia lotenia</i>	LC	R	N	3
Little Spiderhunter	<i>Arachnothera longirostra</i>	LC	R	I	2,3
Small Sunbird	<i>Nectarinia minima</i> *	LC	R	N	2,3
Zosteropidae					
Oriental White-eye	<i>Zosterops palpebrosus</i>	LC	R	I	2,3
Fringillidae					
Common Rosefinch	<i>Carpodacus erythrinus</i>	LC	RM	G	3
Estrildidae					
White-throated Munia	<i>Lonchura malabarica</i>	LC	R	G	2,3
White-rumped Munia	<i>Lonchura striata</i>	LC	R	G	2,3
Spotted Munia	<i>Lonchura punctulata</i>	LC	R	G	3
Black-headed Munia	<i>Lonchura malacca</i>	LC	R	G	3
Passerinae					
House Sparrow	<i>Passer domesticus</i>	LC	R	G	2,3
Ploceinae					
Baya Weaver	<i>Ploceus philippinus</i>	LC	R	G	2,3
Sturnidae					

Family / Common Name	Scientific Name	IUCN	Status	Guild	Source
Jungle Myna	<i>Acridotheres fuscus</i>	LC	R	I	2,3
Southern Hill-Myna	<i>Gracula indica</i>	LC	R	F	2,3
Brahminy Starling	<i>Sturnus pagodarum</i>	LC	RM	F	1,2,3
Rosy Starling	<i>Sturnus roseus</i>	LC	M	F	1,3
Grey-headed Starling	<i>Sturnus malabaricus</i>	LC	R	F	1,3
Common Myna	<i>Acridotheres tristis</i>	LC	R	O	2,3
Oriolidae					
Black-naped Oriole	<i>Oriolus chinensis</i>	LC	RM	F	3
Eurasian Golden Oriole	<i>Oriolus oriolus</i>	LC	RM	F	2,3
Black-headed Oriole	<i>Oriolus xanthornus</i>	LC	R	F	2,3
Dicruridae					
Ashy Drongo	<i>Dicrurus leucophaeus</i>	LC	RM	I	3
Black Drongo	<i>Dicrurus macrocercus</i>	LC	R	I	2,3
Bronzed Drongo	<i>Dicrurus aeneus</i>	LC	R	I	3
Greater Racket-tailed Drongo	<i>Dicrurus paradiseus</i>	LC	R	I	2,3
White-bellied Drongo	<i>Dicrurus caeruleus</i>	LC	R	I	2,3
Corvidae					
Indian Treepie	<i>Dendrocitta vagabunda</i>	LC	R	O	2,3
White-bellied Treepie (Image 6)	<i>Dendrocitta leucogastra</i>	LC	R	O	1,2,3
House Crow	<i>Corvus splendens</i>	LC	R	O	2,3
Jungle Crow	<i>Corvus macrorhynchos</i>	LC	R	O	1,2,3

Endemic birds are marked with asterisk.

IUCN Status: CR - Critically Endangered, EN - Endangered, VU - Vulnerable, NT - Near-threatened, LC - Least Concern

Status: R - Resident, RM - Resident Migratory, M - Migratory

Feeding guild: A - Aquatic vegetarians, G - Granivores, F - Frugivore, P - Piscivores, C - Carnivore (including carrion feeders), O - Omnivores, N - Nectarivores

Source: 1 - Nichols (1944a,b; 1945), 2 - Bhupathy et al. (2009 & 2012), 3 - Babu (pers. obser.), 4 - Rajah Jayapal (pers. comm.)

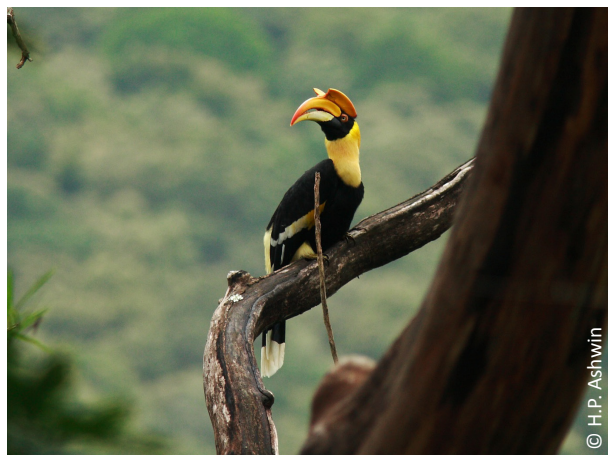


Image 1. Great Pied Hornbill



Image 2. Malabar Laughing-thrush



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Image 3. White-bellied Shortwing



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Image 4. Black-and-Orange Flycatcher



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Image 5. White-bellied Blue Flycatcher



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Image 6. White-bellied Treepie

## REFERENCES

- Ali, S. & D. Ripley (1983). *Handbook of the birds of India and Pakistan*. Compact Edition, Oxford University Press, Mumbai, 737pp.
- Balachandran, S., A.R. Rahmani, N. Ezhilarasi, S. Babu, J.P.P. Chakravarthy & T. Ramesh (2005). Revaluation of bird community structure of Palni Hills with special reference to threatened and endemic species. Final Report. Bombay Natural History Society, Mumbai, 105pp.
- Bhupathy, S., G. Srinivas & N. Sathishkumar (2009). A Study on the Herpetofaunal Communities of the Upper Vaigai Plateau, Western Ghats, India. Final Report Submitted to the Ministry of Environment and Forests. Sálim Ali Centre for Ornithology and Natural History, Coimbatore, 75pp.
- Bhupathy, S., G. Srinivas., N. Sathishkumar, M. Murugesan, S. Babu, R. Suganthasakthivel & P. Sivakumar (2012). Diversity and conservation of selected biota of the Meghamalai landscape, Western Ghats, India. *Current Science* 102(4): 590–595.
- Bhupathy, S. & S. Babu (2013). Meghamalai landscape : a biodiversity hotspot. *Journal of Threatened Taxa* 5(15): 4939–4944; <http://dx.doi.org/10.11609/JoTT.o3592.4939-44>
- Biddulph, B.H. (1956). Occurrence of the Red-faced Malkoha (*Phaenicophaeus pyrrhocephalus*) Pennant in Madurai District: Madras presidency. *Journal of the Bombay Natural History Society* 53(1): 697–698.
- CEPF (2007). Ecosystem profile: Western Ghats and Sri Lanka biodiversity hotspot, Western Ghats region, 95pp.
- Daniels, R.J (2003). Biodiversity of the Western Ghats - an overview. In: Gupta, A.K., A. Kumar & V. Ramakantha (eds.). ENVIS Bulletin: Wildlife & Protected Areas, Conservation of Rainforests in India, 4(1): 229–242.
- Gokula, V. & L. Vijayan (1996). Birds of Mudumalai Wildlife Sanctuary, India. *Forktail* 12: 143–152.
- Hoffmann, T.W. (1996). New bird records in Sri Lanka and some connected matters. *Journal of the Bombay Natural History Society* 96: 382–388.
- IUCN (2012). IUCN Red List of Threatened Species. Version 2012.1. Electronic database accessible at <http://www.iucnredlist.org/>

- captured on 25 July 2012.
- Johnsingh, A.J.T. (2001).** The Kalakad-Mundanthurai Tiger Reserve: A global heritage of biological diversity. *Current Science* 80(3): 378–388.
- Johnsingh, A.J.T. & J. Joshua (1994).** Avifauna in three vegetation types on Mundanthurai Plateau, south India. *Journal of Tropical Ecology* 10(3): 323–335; <http://dx.doi.org/10.1017/S0266467400007999>
- Kannan, R. (1998).** Avifauna of the Anamalai Hills (Western Ghats) of southern India. *Journal of the Bombay Natural History Society* 95(2): 193–214.
- Manakadan, R. & A. Pittie (2001).** Standardized common and scientific names of the birds of the Indian subcontinent. *Buceros* 6(1): 1–37.
- Myers, N., B.A. Mittermeier, C.G. Mittermeier, G.A.B. da Fonesca & J. Kent (2000).** Biodiversity hotspots for conservation priorities. *Nature* 403: 853–858; <http://dx.doi.org/10.1038/35002501>
- Nair, S.C. (1999).** The southern Western Ghats. A biodiversity conservation plan. New Delhi, 92pp.
- Nichols, E.D (1944a).** Occurrence of birds in Madura District, Part I. *Journal of the Bombay Natural History Society* 44(3): 387–407.
- Nichols, E.D (1944b).** Occurrence of birds in Madura District, Part II. *Journal of the Bombay Natural History Society* 44(4): 574–584.
- Nichols, E.D (1945).** Occurrence of birds in Madura District, Part III. *Journal of the Bombay Natural History Society* 45(2): 122–132.
- Nirmala, T. (2002).** Ecology of bird communities in the Anaikatty Hills, Coimbatore. PhD Thesis, Bharathiar University, Coimbatore, 274pp.
- Prakash, V., M.C. Bishwakarma, A. Chaudhary, R. Cuthbert, R. Dav, M. Kulkarni, S. Kumar, K. Paudel, S. Ranade, R. Shringarpure & R.E. Green (2012).** The Population Decline of Gyps Vultures in India and Nepal Has Slowed since Veterinary Use of Diclofenac was Banned. *PLoS ONE* 7(11): e49118. <http://dx.doi.org/10.1371/journal.pone.0049118>
- Recher, H.F. & W.E. Davis (2002).** Foraging profile of a Salmon Gum woodland avifauna in Western Australia. *Journal of Royal Society of Western Australia* 85: 103–111.
- Islam, M.Z. & A.R. Rahmani (2004).** *Important Bird Areas: Priority sites for conservation*. Indian Bird Conservation Network, Mumbai, 1133pp.
- Rasmussen, P.C. & J.C. Anderton (2005).** *Birds of South Asia. The Ripley Guide*. Smithsonian Institution and Lynx Editions, 1072pp.
- Somasundaram, S. & L. Vijayan (2008).** Foraging behavior and guild structure of birds in the Montane wet temperate forests of the Palni Hills, south India. *Podoces* 3(1/2): 79–91.
- Stattersfield, A.J., M.J. Crosby, A.J. Long & D.C. Wege (1998).** *Endemic Bird Areas of The world: Priorities for Biodiversity Conservation*. Birdlife International, Cambridge, 846pp.
- Tamil Nadu Government Gazette (2009).** *Declaration of Meghamalai Wildlife Sanctuary*. Regd. No. TN/CCN/467/2009-11: 322–325.

