

DISTRIBUTION

Introduction

This chapter deals with the distribution of Malabar Trogon. It is considered to be disjunct based on the ranges given by Ali and Ripley (1987), and have great significance because they represents relict outliers of formerly continuous population interconnected during the Plestocene (Ali, 1949b and 1969). Distribution of Malabar Trogon are mentioned in the accounts of Ali (1936,1959), Bourdillon (1878), Fairbank (1878), Grubh and Ali (1975), Kannan (1998), Kinloch (1921), Ripley(1978), Susanth(1993), and Whistler and Kinnear (1932).

Whistler and Kinnear (1932) reviewed most of the accounts on Trogons in his Vernay scientific survey of the Eastern Ghats: Lapersonne seen a pair at Sankaramettu at 400 feet; Ball reported from Jaypore; Blanford obtained a male north of Ellore; Hume collected a pair from Calicut; William Davidson described this bird was abundant; occur all along the Wynaad and up to the slopes of the Nilgiris to at least 6500 feet; and observed in the forests of Droog, at Coonor, at Pykarra and Neddivattum; Pythium Adams stated that it is distinctly uncommon in the Nilgiris and recorded from there.

Harpactes are supposed to be uncommon in the Western Ghats and inhabits the Western Ghats forest north to about Bombay (Ali 1959). Lainer (1999) conducted studies in Goa and states that they are uncommon and resident are evenly distributed from the moist deciduous forests at the base through the wet evergreen slopes to the top (800 m above MSL).

During Travancore Bird Survey, Ali (1936) collected specimens from Maraiyoor (3500 feet), Thattakad (200 feet), Tenmala (500 feet) and Kurirkutty (100 feet). He collected Trogons from Kumily, Periyar lake environs (3000 feet), Rajampara (1350 feet) and from Ashambu Hills (2000 feet). Kannan (1998) made some observations on this species at Anamalai Hills. According to him this species is uncommon. He had recorded this from Top Slip, (300 –750 m), Kadambari Shola (Valparai Plateau 100-1700 m) and Chalakkudy forest (750-1000 m). Susanth (1993) reported this species from Ponmudi hills 3000 m. After Salim Ali, Sugathan and Aby (1996) described the occurrence of Trogons in Thattakad. No avifaunal study has been conducted so far in Pooyamkutty - Idamalayar Valley (latitude $10^{\circ} - 10^{\circ} 15' N$ and longitude - $70^{\circ} 9' - 77^{\circ} 10' E$).

Out of the aforementioned sight records and accounts, no other work has been encountered during the literature search. The current distributions of

Malabar Trogon are of great importance in providing a background for conservation.

Methodology

For the study of current distribution of Malabar Trogon, areas were surveyed and all Trogons seen or heard were recorded. Each survey consisted of a visit of minimum 3 days duration, covering a large range of forests types. Special attention was given to conduct the survey in the early morning hours. In some areas up to 20 km were covered at a stretch. Along with the sighting, habitat type, altitude, and distance to the water and weather were noted. Footpaths, nature trails or forests roads were used for the survey.

Extensive surveys were conducted for preparing the distribution maps of the bird in the Idamala-Pooyamkutty valley. Some other areas were also visited and surveyed for Trogons, which are Aralam, Parambikkulam, Peechi, and Idukki wild life sanctuaries, Nilamboor, Vazhachal- Sholayar forests, Mullaringad forests, Periyar tiger reserve and Eravikulam National Park. Observations were also done in the Borivilly National Park, Mumbai, Kumtha forests of Karnataka and Meghamala forests of Tamil Nadu.

Results and discussion

Places surveyed in the Idamala Pooyamkutty valley for Trogon were Pindimedu, Tholunada, Kunjiyar, Avarkutty, Elamplassery, Mammalakandom, Manikandanchal, Thalavachapara, Mlavana, Kallelimedu, Kodumpikuthu, Kunjipara, Ennakal, Idamalayar Dam Top, Thalumkandam, Idukkikudi Eprathode, Kappayam, Power house, KSEB Check post, Palavanpady and Anakkayam. Of these 37 sites Trogons were sighted at 26 locations. Out of these sites in which Trogons occurred, 13 sites come under the moist deciduous forest and 9 sites consisted of semi-evergreen forests, 2 from evergreen forests, and 3 sites were teak plantations. The plantation areas, in which Trogons present, were ecotones or borderline, between the forest and plantations (Fig13, Table16).

Details of the distribution study at Thattakad were included in the Table 17. Of the 32 sites Trogons were recorded from 28 sites and total 61 birds were sighted. Out of these sites in which Trogons occurred, 8 sites come under the moist deciduous forest and 13 sites consisted of semi-evergreen forests, and 2 sites were in teak plantations (Fig12).

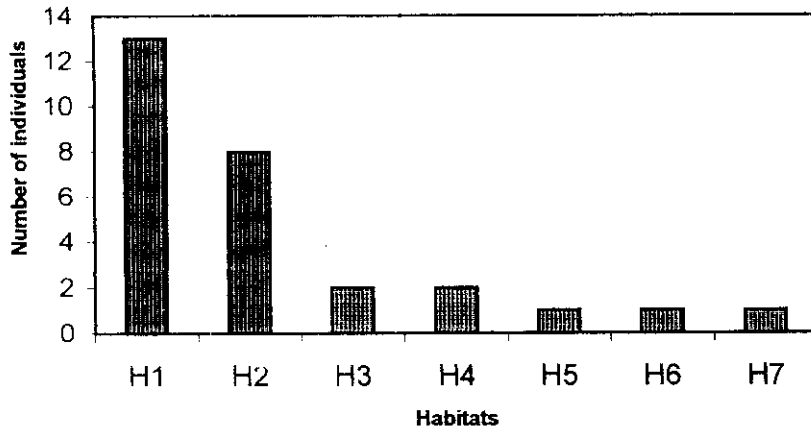


Fig.12: Occurrence of Malabar Trogon in different habitats in the Thattakad bird sanctuary

H1 = Semi-evergreen forest, H2 = Moist deciduous forest, H3 = Bamboo thickets, H4 = Teak plantation, H5 = Mahogany plantation, H6 = Rubber plantation, and H7 = Homestead.

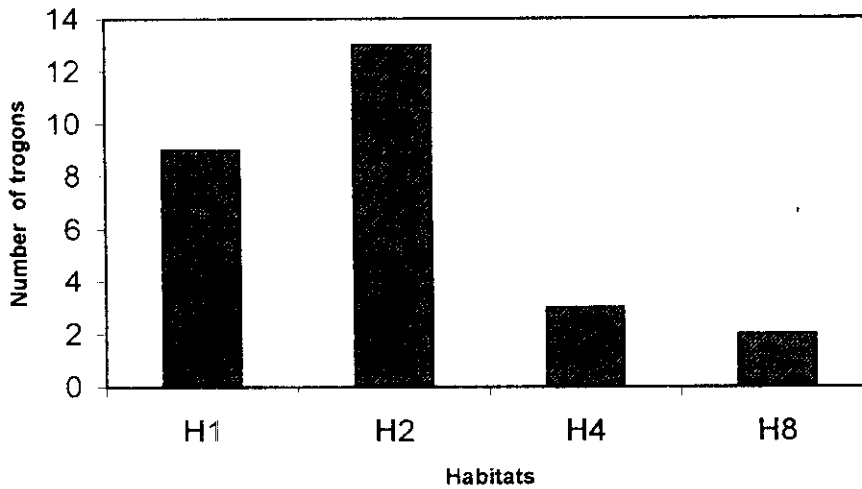
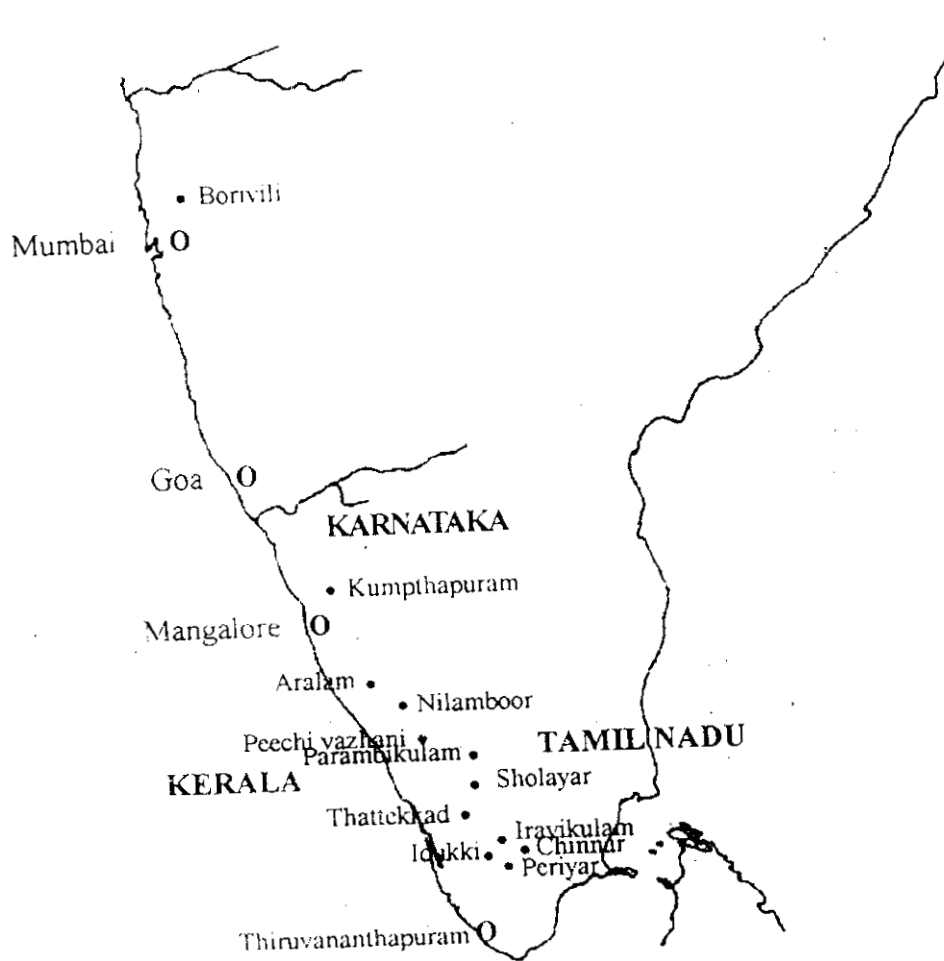


Fig.13: Occurrence of Malabar Trogons in Idamala-Pooyamkutty valley

H1 = Semi-evergreen forest, H2 = Moist deciduous forest, H4 = Teak plantation, H8 = Evergreen forests



Map: 5 Peninsular India illustrating the areas where the surveys for Malabar Trogon were conducted during the study

Table 16
Record of the presence or absence of Malabar Trogon
in Idamala- Pooyamkutty valley

SI NO	Name of the site	No of birds	Male or Female	Habitat	Remark
1.	Pindimedu	2	♂♀	Deciduous forests	Near to the river
2.	Kunjayar	-		Deciduous forests	Near to the river
3.	Avarakutty	-		Deciduous forests	
4.	Mammalakandam	1	♂	Semi-evergreen forests	
5.	Manikantanchal	-		Semi-evergreen forests	
6.	Thalavachapara	-		Semi-evergreen forests	
7.	Mlavana	2	♂♀	Deciduous forests	Near to the river
8.	Kallelmedu	2	♂♀	Deciduous forests	
9.	Kodumbiri kuthu	1	♀	Deciduous forests	Near to the river
10.	Kunjippara	-		Semi-evergreen forests	Near to the river
11.	Tholunada	-		Semi-evergreen forests	Near to the river
12.	Elamblassery	-		Semi-evergreen forests	Near to the river
13.	Anakkayam	-		Semi-evergreen forests	Near to the river
14.	Peendimedu	2	♂♀	Deciduous forests	
15.	Anakkulam	1	♂	Deciduous forests	
16.	Palavanpady	1	♂	Teak plantation	Nearby forest
17.	Adumudy	1	♀	Deciduous forests	
18.	Thalunkandam	1	♂	Semi-evergreen forests	
19.	Idukki kudy			Semi-evergreen forests	
20.	Eprathode			Deciduous forests	Near to the river
21.	Thundathi	1	♂	Deciduous forests	
22.	Old Bhoothathankettu	2	♂♀	Deciduous forests	
23.	Kappayam	1	♀	Evergreen forests	
24.	Idamalayar power house	2	♂♀	Evergreen forests	
25.	Idamalayar checkpost	2	♂♀	Teak plantation	
26.	Idamalayar dam top	1	♂	Deciduous forests	
27.	Ennakkal	2	♂♀	Semi-evergreen forests	
28.	Chelamala	2	♂♀	Semi-evergreen forests	
29.	Chelamala	1	♂	Teak plantation	Emerging forest
30.	Aram mile	1	♂	Semi-evergreen forests	
31.	Neriamangalam	1	♀	Semi-evergreen forests	
32.	Poothupara			Deciduous forests	Near to the river
33.	Inchathotty	1	♂	Deciduous forests	Near to the river
34.	Charupara	1	♂	Deciduous forests	Near to the river
35.	Ranikkallu			Semi-evergreen forests	
36.	Inchathotty mala	1	♀	Deciduous forests	
37.	Pinavoorkudy			Evergreen forests	
38.	Enippara			Deciduous forests	
39.	Knachery	2	♂♀	Semi-evergreen forests	

Table 17

Record of the presence or absence of Malabar trogon in the bird Sanctuary, Thattakad

Sl NO	Name of the site	No of birds	Male/ Female	Habitat	Remark
1.	Sathrappady	2	♂♀	Semi-evergreen forests	
2.	Njayappilly	4	2♂2♀	Deciduous forests	
3.	Thoppi mudy	2	♂♀	Deciduous forests	
4.	Marottichal	1	♀	Semi-evergreen forests	
5.	Marottichal	2	♂♀	Mahogany plantation	Proximity of evergreen forests
6.	Marottichal	2	♂♀	Teak plantation	Proximity of deciduous forests
7.	Kannukalippara	2	♂♀	Semi-evergreen forests	
8.	Elavumchode	1	♀	Semi-evergreen forests	
9.	Anachathapara	1	♀	Semi-evergreen forests	
10.	Ovunkal	2	♂♀	Deciduous forests	
11.	Kolembay thode	5	2♂3♀	Semi-evergreen forests	
12.	Elavumchode slope	2	♂♀	Bamboo thickets	
13.	Sivashethram pady	2	♂♀	Rubber plantation	Proximity of deciduous forests
14.	Onnampara	2	♂♀	Teak plantation	Proximity of deciduous forests
15.	Kallippara	1	♂	Semi-evergreen forests	
16.	Urulanthanny station	4	2♂2♀	Semi-evergreen forests	
17.	Urulanthanny thode	2	♂♀	Semi-evergreen forests	
18.	Thambakathode	1	♂	Deciduous forests	
19.	Bharanikkuzhy	2	♂♀	Semi-evergreen forests	
20.	Koottampara valley	3	2♂1♀	Deciduous forests	
21.	Koottampara thandu	1	♂	Deciduous forests	
22.	Bharanikkuzhy thode	1	♂	Semi-evergreen forests	
23.	Bharanikkuzhy thandu	2	♂♀	Bamboo thickets	
24.	Sathrappady thandu	7	2♂5♀	Deciduous forests	
25.	Mathewchathapara	2	♂♀	Deciduous forests	
26.	Mathewchathapara	2	♂♀	Semi-evergreen forests	
27.	Koorppayippara	1	♀	Semi-evergreen forests	
28.	Koottikkal	0	-	Teak plantation	Isolated Teak plantations
29.	Vacant land	0	-	Teak plantation	Isolated Teak plantations
30.	Thattakad kadavu	0	-	Teak plantation	Isolated Teak plantations
31.	Manimaruthumchal	0	-	Teak plantation	Isolated Teak plantations
32.	Thattakad kadavu	2	♂♀	Homestead	Proximity of deciduous forests

Table 18

**Record of the presence or absence of Malabar Trogon
from the different areas where surveys were carried out during the study**

SI NO	Name of the site	No of birds	Male or female	haitat	Remark
1.	Kunarkutty	2	♀♀	Semi-evergreen forests	Near to the river
2.	Thoonakkadavu			Teak plantation	Near to the river
3.	Venkoly mudy			Semi-evergreen forests	
4.	Anappady			Deciduous forests	
5.	Theellikkal	1	♂	Deciduous forests	
6.	Vazhacal	1	♂	Deciduous forests	Near to the river
7.	Sholayar	2	♂♂	Evergreen forests	Near to the river
8.	Athirappilly			Deciduous forests	
9.	Peechy	2	♂♀	Deciduous forests	
10.	Marottychal	2	♂♀	Deciduous forests	
11.	Anchurah	4	2♂2♀	Evergreen forests	Near to water
12.	Lake Enviorns	2	♂♀	Semi-evergreen forests	Near to water
13.	Idappalayam			Semi-evergreen forests	Near to water
14.	Kokkara	2	♂♀	Teak plantation	
15.	Karadikkavala	1	♂	Evergreen forests	
16.	Mangaladevi shola			Shola	
17.	Mullakkudy	1	♂	Deciduous forests	Near to water
18.	Mullakkudy	2	♂♀	Semi-evergreen forests	
19.	Pamba	1	♀	Semi-evergreen forests	
20.	Sabarimala	2	♂♀	Evergreen forests	
21.	Uppupara	2	♂♀	Evergreen forests	
22.	Idukky	1	♂	Evergreen forests	
23.	Eravikulam shola			Shola	
24.	Turners valley			Shola	
25.	Varattikkulam shola			Shola	
26.	Poovar			Shola	
27.	Rajamala shola			Sola	
28.	Meghamala check post	1	♂	Deciduous forests	

*Trogon's absence represented in the above three Tables by blank columns

The High altitude forests, which surveyed for Trogons include Idukki Wild Life Sanctuary, Eravikulam National Park, Periyar Tiger reserve, and Highway Shola forests. No work had been published on the avifauna of Idukki Wildlife sanctuary. Three visits were made to search Trogons in the Shola-grass land and forest areas. Only one sight record of Trogon from evergreen forests of the Paramada area near to the Thodupuzha - Idukki road. At Periyar Trogons were recorded from Kokkara, Anchuruli, Lake environs, and Idappalayam. Details of bird sightings were in the Table. Trogons were not recorded from the Mangaladevi shola of Periyar Tiger reserve, Eravikulam National Park and High wavy shola forests. In the Table 18 described, the occurrence of Trogons recorded from different areas visited during the study.

Conclusion

Malabar Trogon is a forest bird seen only in the tropical evergreen, semi-evergreen, moist deciduous forests and the monoculture plantations around these forests. From the studies it was clear that the distribution of Malabar Trogon was from the sea level to the high altitude forests, except the shola –grass land areas. In the forests of Idamala- Pooyamkutty valley and in the Thattakad bird sanctuary Malabar Trogon is found to be an uncommon bird.

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