

**A STUDY ON THE POPULATION AND HABITAT OF
THE RUFOUS-BREASTED LAUGHING THRUSH
*GARRULAX CACHINNANS***



Salim Ali Centre for Ornithology and Natural History

**A STUDY ON THE POPULATION AND HABITAT OF
THE RUFOUS-BREASTED LAUGHING THRUSH
*GARRULAX CACHINNANS***

A project funded by

**Oriental Bird Club
&
Sálim Ali Centre for Ornithology and Natural History**

Principal Investigator
Lalitha Vijayan

Senior Research Fellow
V. Gokula

Consultant
S.N. Prasad



**SÁLIM ALI CENTRE FOR ORNITHOLOGY AND
NATURAL HISTORY**

2000



Lalitha Vijayan is the Principal Scientist in the Division of Avian Ecology. She received her Ph.D. degree from Bombay University for a study on the comparative biology of drongos in South India under the guidance of late Dr. Salim Ali. She worked in a multidisciplinary project on the 'Ecosystem of Keoladeo National Park' for a decade. At SACON, she has been working on the avian communities and endangered species in the Western Ghats and Andaman Islands.

V. Gokula obtained his Ph.D. in 1999 from Bharathiar University, Coimbatore for his work on the Bird communities in the dry deciduous and thorn forests in the Mudumalai Wildlife Sanctuary. He worked in the Division of Avian Ecology, SACON for five years.

S. Narendra Prasad is the Principal Scientist in the Terrestrial Ecology Division. He was awarded Doctorate from the Indian Institute of Science, Bangalore for his studies on the ecology and utilization of bamboo resources of Karnataka. Over the past two decades he has been actively involved in ecological studies, especially with the help of Remote Sensing and GIS in the Western Ghats and Himalayas.

© Salim Ali Centre for Ornithology & Natural History (2000)
Moongilpallam, Anaikatty P.O.
Coimbatore 641 108, INDIA
Ph: 0422-857103 to 105
Fax: 0422-857088
Email: salimali@vsnl.com & sacon@vsnl.com

Cover photo: Shola forest and grasslands in Upper Nilgiris - *L. Vijayan*
Inset: Rufous-breasted Laughing Thrush - *Pictorial guide to the birds of India & Pakistan*

Typesetting: K.K. Ramakrishnan

CONTENTS

| | |
|--|-----|
| PREFACE | i |
| ACKNOWLEDGEMENTS | ii |
| SUMMARY | iii |
| INTRODUCTION | 1 |
| STUDY AREA | 3 |
| Location | 3 |
| The landscape | 3 |
| Human population | 4 |
| Land use conflicts | 4 |
| Rainfall | 4 |
| Vegetation | 4 |
| Avifauna | 5 |
| METHODS | 5 |
| Habitat Mapping of Upper Nilgiri Plateau | 5 |
| Collection of information on the distribution of the species | 6 |
| Survey of the habitats of the species | 7 |
| RESULTS AND DISCUSSION | 8 |
| Present and past distribution of the Rufous-breasted Laughing Thrush | 8 |
| Survey of the Nilgiri hills for the Rufous-breasted Laughing Thrush | 9 |
| Assessment of availability of sholas in the Upper Nilgiris Plateau | 15 |
| Estimate of the population of the Rufous-breasted Laughing Thrush | 16 |
| GENERAL CONCLUSION AND CONSERVATION ISSUES | 17 |
| Conservation problems | 17 |
| Conservation measures taken | 18 |
| Measures proposed | 18 |
| REFERENCES | 19 |
| APPENDICES | 22 |

SUMMARY

Tropical forests are richer in biological diversity and support a large number of habitat specialist species. Human disturbances, especially in the tropical forests, affect the patterns and processes in the natural communities. Degradation or decline of evergreen forests in the southern Western Ghats was discernible (47%) during 1960 to 1988 which has probably led to the decline of many species, especially the endemics because of their specialization in the habitat requirements. Hence, assessing the status of such an endemic and its habitat is an urgent global need. The Rufous-breasted (Nilgiri) Laughing Thrush *Garrulax cachinnans* is one of the 16 species of birds endemic to the Western Ghats which is one of the 24 Global Hotspots of Biodiversity as well as one of the 218 Endemic Bird Areas of the World. This thrush is the only bird endemic to the Nilgiris and inhabits a very restricted range in the shola forests of the Upper Nilgiris. It is included in the globally threatened list in the Red Data Book of the Birds of Asia being released. However, there was no estimate of its population. Hence, a study was carried out during February to December 2000 to assess the same in its distribution range. Information and data on the distribution of this species were collected from the earlier records in literature, bird-watchers, and various museums inside and outside the country. These areas of sightings and other probable areas were surveyed for the species. The present study was undertaken mostly in the environs of Coonor, Kotagiri, Naduvattam, Ooty, Upper Bhavani and Mukurthi in the Nilgiris, Tamil Nadu and Thodukki in the Attappady Valley and Sispara-Walakkad in the Silent Valley in the Kerala part of the Nilgiri Hills.

The survey revealed that the Rufous-breasted Laughing Thrush is facing local extinction in a few places mentioned in the earlier reports. Among the localities surveyed, the Upper Nilgiri plateau (including the Mukurti National Park and a small part of the Silent Valley National Park) still supports the major population as this area has more number of less disturbed shola patches in different size classes. Smaller and isolated sholas as well as highly disturbed sholas did not have this thrush. The shola forest was identified and classified into various size classes using Remote Sensing and GIS tools. The sample data on the Rufous-breasted Laughing Thrush obtained from the surveys were used to calculate the average density in different size classes of the shola forests (0-5, >5-10, >10ha). The average density of this thrush was 1.12 adult bird per hectare inside the protected areas while it was only 0.52 in the shola forests outside the National Parks. A total of 1252.98 ha (13%) of the 9610.8 ha in the Upper Nilgiri Plateau analyzed was identified as shola forest. Based on the average density of the Rufous-breasted Laughing Thrush for the different size classes of sholas, likely population of the breeding individuals was generated for the available shola forests. Thus, the mapped area of the shola forest was estimated to have about 1400 adult individuals. However, some of the shola forests could not be mapped and analyzed because of various constraints; this area is approximately 500-600 ha which would have 320-384 birds (at 0.64 birds/ha). In the plantations adjacent to the sholas only 0.1 bird per hectare was observed, and hence would have in total about 100-



200 birds. Thus, the total population of the Rufous-breasted Laughing Thrush is estimated to be between 1800 and 2000 in an area of about 1800 ha of the shola forest existing in the Nilgiri Hills.

The major threat to this species has been the disturbance to the shola forest by way of degradation and alteration into plantations and reservoirs. However, there has been a welcome move to stop further conversion of forests and grasslands into plantations in Nilgiris. The present study reiterates the importance of protecting the shola forests for the conservation of this endangered thrush and recommends that (1) shola forests and grasslands shall not be converted into plantations of anykind, (2) include the entire laughing thrush habitats in the Nilgiris into the Mukurthi National Park and call it as the Mukurthi National Park and Nilgiri Laughing Thrush Sanctuary, the later will help give emphasis on the bird and (3) restoration of the shola forests with involvement of the local community.