



IMPERILLED CUSTODIANS OF THE NIGHT:

A STUDY ON ILLEGAL TRADE,
TRAPPING AND USE OF OWLS
IN INDIA

ABRAR AHMED

A TRAFFIC INDIA REPORT

TRAFFIC
the wildlife trade monitoring network

This report was published
with the kind support of





Published by TRAFFIC India and WWF-India,
New Delhi, India

© 2010 TRAFFIC India. All right reserved.

ISBN No. 978-1-85850-243-4

Reproduction in any form of the material in this publication, whether in full or in part, may be done only with due credit to the publisher.

The TRAFFIC symbol copyright and Registered Trademark ownership is held by WWF. TRAFFIC is a joint programme of WWF and IUCN.

The views expressed in this publication do not necessarily reflect those of the TRAFFIC network, WWF or IUCN. While utmost care has been taken to publish the document accurately, TRAFFIC India will not be responsible for any errors.

Suggested Citation: Ahmed, A. (2010). *Imperilled Custodians of the Night: A study on illegal trade, trapping and utilization of owls in India*. TRAFFIC India/WWF-India. New Delhi, India.

Photo Credits: All images by Abrar Ahmed or as mentioned.

Layout, Design and Printing by Adstrings Advertising Pvt. Ltd.

Maps by Virender Kumar

Illustrations by Prasanth A. V.

Cover photo captions:

Cover photo: Dyed Spotted Owlet to give an appearance of a larger, horned owl.

Inside front cover: Mottled Wood-owl in a trapper's village

Inside title page: Captive Rock Eagle-owls

Inside back cover: A village trapper offering fully-fledged Mottled Wood-owl chicks for sale

Map Disclaimer: The designations of the geographical entities in this publication and the presentation of the material do not imply the expression of any opinion whatsoever on the part of WWF-India or TRAFFIC India, concerning the legal status of any country, territory, or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.



IMPERILLED CUSTODIANS OF THE NIGHT:

A STUDY OF THE ILLEGAL
TRADE, TRAPPING AND UTILIZATION OF OWLS
IN INDIA

Principal Author
Abrar Ahmed

Project Supervisor
Samir Sinha

Project Advisor
Dr. Asad R. Rahmani



TRAFFIC India / WWF-India
(2010)



CONTENTS

Foreword	5
Preface	6
Acknowledgments	8
EXECUTIVE SUMMARY	9
OBJECTIVES	10
BACKGROUND	11
Owls: An Overview	11
Relationship with man	12
The wild bird trade	13
LEGISLATION	14
MATERIALS AND METHOD	15
THE OWL TRADE IN INDIA	17
OWL SPECIES RECORDED IN TRADE WITHIN INDIA	20
Spotted Owlet <i>Athene brama</i>	20
Barn Owl <i>Tyto alba</i>	22
Rock Eagle-owl <i>Bubo bengalensis</i>	23
Jungle Owlet <i>Glaucidium radiatum</i>	26
Collared Scops-owl <i>Otus bakkamoena</i>	27
Brown Fish-owl <i>Ketupa zeylonensis</i>	28
Dusky Eagle-owl <i>Bubo coromandus</i>	29
Mottled Wood-owl <i>Strix ocellata</i>	30
Asian Barred Owlet <i>Glaucidium cuculoides</i>	31
Collared Owlet <i>Glaucidium brodiei</i>	32
Brown Wood-owl <i>Strix leptogrammica</i>	33
Oriental Scops-owl <i>Otus sunia</i>	34
Spot-bellied Eagle-owl <i>Bubo nipalensis</i>	35
Tawny Fish-owl <i>Ketupa flavipes</i>	36
Eastern Grass-owl <i>Tyto longimembris</i>	36
Other owl species in India	37
SEIZURES	41
Export of owls	43
UTILIZATION OF OWLS	44
Black magic	44
Street performances	45
Taxidermy	46
Zoos	47
For food	47
Use in folk medicines	48
For capture of other birds	50
For claws and feathers in tribal headgear	52
Owl eggs for gambling	52



Miscellaneous use	52
COMMUNITIES/TRIBES ASSOCIATED WITH OWLS IN INDIA	53
TRAPPING TECHNIQUES	57
Latex and bamboo method	57
Takkva method	58
Insect, latex and dome method	58
Mice and latex method	58
Hanging net	59
Falcon noose trap	59
Snares	59
Fall trap	59
Taking fledglings from the nest	60
Other methods	60
SUPERSTITIONS AND TOTEMS CONCERNING OWLS IN INDIA	61
CONCLUSION	64
RECOMMENDATIONS	65
ANNEXURE I	70
REFERENCES	74
GLOSSARY	76

LIST OF MAPS, TABLES, BOX & FIGURES

Map 1: Owls trade and trapping area	16
Map 2: Major trade routes	40
Table 1: Frequency of occurrence of Indian owl species observed in trade	18
Table 2: Top five owl species preferred by traders in India	18
Table 3: Principal Indian states and territories where owl trade takes place	18
Table 4: Principal Indian states and territories where actual trapping of owls takes place	19
Table 5: Market prices of owls in the Indian bird trade	38
Table 6: Major markets/localities with estimated minimum annual turnover of 20 000 to 50 000 wild birds, including owls	39
Figure 1: Owl & owl parts confiscated from various sources	42
Figure 2: Parts of owls used in various occult practices	68
Box 1: Care and feeding of owls	66





for a living planet®

Ravi Singh
Secretary General & CEO

WWF-India Secretariat :
Pirojsha Godrej National
Conservation Centre
172-B, Lodi Estate,
New Delhi-110 003
India

Tel: +011-41504777/4778
Fax: +011-41504779
www.wwfindia.org

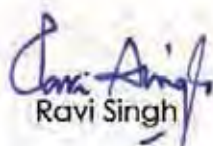
FOREWORD

Owls, while not generally acknowledged for their part, play an important role in the ecosystem. Little is known to the common person about these nocturnal birds of prey, but in India and in many other countries across the world, they hold a special fascination. Owls have been associated with various myths, folklore and superstitions and evoke fear and awe across diverse cultures.

Given the mysteries usually associated with them, it may also come as a surprise that owls are heavily targeted for illegal trade. This has long term implications for the health of our natural ecosystems and in indicating one of the reasons for declining populations of these birds of prey. As such, this important study on the illegal trade and wrongful "utilization" of owls in India is most timely. It highlights little known aspects of illegal trade in owls across India and is the first such study of its kind.

Hopefully, this study will help focus conservation attention towards the plight of these birds and encourage similar studies on trade and conservation of other lesser known species across India.

I compliment the author for his efforts in putting together this useful report.


Ravi Singh

President: Dr. Divyabhanusinh Chavda
Vice President: Mr. Tarun Das
Mr. Jamshyd N. Godrej
Dr. Jamshed J. Irani
Mr. Pratap Singh Rave
Admiral Madhyendra Singh
Dr. B. Theodore Baskaran



Preface

In 1994, whilst surveying in the Thar Desert State of Rajasthan with my mentor Dr Asad R. Rahmani, we came across two dead Short-eared Owls killed in road accidents. I commented: "I wish the four legs from these dead owls were given to an owl seller to save further owls from being trapped and killed for black magic". Dr Rahmani judiciously advised that I should publish my knowledge of the bird-trade to make people aware about the impact of bird trapping.

Several further events have motivated me to study the owl trade in India. Following the release of two reports by TRAFFIC India – Fraudulence in Indian Live Bird Trade – An Identification Monograph for Control of Illegal Trade (Ahmed, 1999) and Live Bird Trade in Northern India (Ahmed, 2007) – the media frequently highlighted the issue of illegal bird trade. During the festival of Diwali in 2000, a journalist interviewed me about the practice of sacrificing owls in India. This led to several queries and reports about the trade in owls. Mr Manoj Misra, then Director of TRAFFIC India, once asked me how I came to see so many species in trade, whereas a casual visitor to a bird market rarely sees birds such as owls. I explained to him that owls are neither meant for the pet or food trades so are hardly ever displayed. Birds like owls are sold at a premium, brought in only following a specific request by a customer for use in black magic. Often they are delivered to the client's doorstep. Therefore such trade remains undocumented, as the sold specimens are secretly sacrificed. Increasing awareness of the illegality of the wild bird trade is forcing this traditional business underground.

In India today, theme parties are becoming more and more fashionable. At the beginning of 2008, I received a call from a wealthy friend's wife requesting a favour. To my surprise, she asked for a live white-coloured owl to be present at her son's tenth birthday party. Knowing my association with birds, she was quite confident that I would heed to her request. Perplexed, I asked if I was to provide the owl as a gift or whether it was required for some black magic ritual on her son's birthday. She quickly clarified: "No, the party theme is 'Harry Potter' and we want to have 'Hedwig' – Harry's pet owl. Please ask someone to capture and bring the owl to us. We can pay the cost." Owls make up part of Harry Potter's magical world, both on the silver screen and in the original books by J. K. Rowling. Although Hedwig spends much of her time in a bird cage in Harry's room, real owls do not make good pets because they need room to fly and hunt for food. Unaware of the seriousness of such an action under the *Wildlife (Protection) Act, 1972* or the penalties involved, she kept requesting me to arrange for an owl. This was probably one of the strangest demands made to me as an ornithologist. After her call I began my research into the "Hedwig" trade.

In the end, I did bring three white owls to the theme party. I drew owl pictures resembling Hedwig and hung them at appropriate vantage points on the lawn. My friend thanked me for keeping his wife's promise. Later in the evening, I heard an owlet calling, and to everyone's delight a real Spotted Owlet sat on an electric pole at the gate of the venue. I thanked God and took this opportunity to show everyone "their" owl. The children clapped their hands with delight and the owl soon flew off. Several of the partygoers have subsequently joined bird watching groups.

Today, after so many years under Dr Asad Rahmani's guidance, I am able to bring out this report on the trapping, trade and utilization of owls in India and hope to publish further similar reports on trade in other group of birds.

Abrar Ahmed



Mottled Wood owl chicks waiting to be sold



Acknowledgments

I express my gratitude to TRAFFIC India and WWF-India for assigning me this study. To Mr Ravi Singh, Secretary General and CEO, WWF-India and Mr Samir Sinha, Head, TRAFFIC India, for funding and initiating the owl project. I owe a debt of gratitude for their confidence in my ability to undertake this work and for their constant encouragement. Special thanks to my teacher, Dr. Asad R. Rahmani, Director, Bombay Natural History Society, Mumbai; for lending me his guidance and support throughout my years of research.

At TRAFFIC International, I thank Mr Steven Broad, Executive Director; Mr Roland Melisch, Global Programme Co-ordinator; Dr Richard Thomas, Global Communications Co-ordinator and Ms Julie Gray for their inputs and editorial help.

I am indebted to Mr Tapan K. Ghosh and Mr K. P. K. Kutty for editorial help. During my years of survey and analysis, several people have helped me in many ways. My sincere gratitude and thanks go to each and every one of them. I would particularly like to mention the following: Mr Aseem Srivastava, ex-DIG (WL) MOEF; Mr V. K. Yadav, CF (WL) Kolkata and Dr Ram Lakhan Singh, ex PCCF (WL), Uttar Pradesh, Mr R. N. Mishra, Ex. PCCF (WL) Chattisgarh, Mr S. K. Niraj, ex Deputy Director, Wildlife Preservation (Western Region), Mr Santosh Tiwari Deputy Director, Ms Aarti Singh, Mr B. S. Grum and Mr K. N. Singh of Wildlife Preservation office, (Northern Region), Mr J. C. Daniel, Mr Prashant Mahajan and Mr Girish Jathar, BNHS, Mumbai; Dr Anwaruddin Choudhury, Prof. P. C. Bhattacharjee, Dr Rathin Barman, Dr Firoz Ahmed, Dr Bibhuthi Lahkar, Assam; Mr A. M. K. Bharos, Mr Amar N. Prasad, Raipur; Mr Aasheesh Pittie, Lt Mr Siraj Taher and Mr Humayun Taher, Hyderabad; Mr Arvind Mishra, Bhagalpur; Mr Manoj Kulshrestha, Jaipur, Mr P. R. Sinha, former Member Secretary, Central Zoo Authority, Mr B. C. Choudhury, Dr S. P. Goyal, Mr Dhananjai Mohan, WII, Shri. S. K. Mukherjee ex-Director, WII, Dehradun; Mr Rakesh Vyas, Mr R. S. Tomar and Mr Nagvendra Singh of Hadoti Naturalist Society, Kota; Ms Chitra Narayanan, Dr. Iqbal Malik, Col. Gautam Das, Mr L. M. Pant, Dr Rahul Kaul, Mr Ritwick Dutta, Ms Alka Tomar, Mr Zafar-ul Islam, Mr Brij Kishore Gupta, Mr Nikhil Devasar, Ms Pratibha Pande, Mr Vijay Kutty, Mr S. Sharma, Mr. Mohit Kalra, Mr. C.R. Naveen, Mr. Jagdish Rajkumar, Dr. T. Sharma, Mr Dharma Singh, Mr Pramesh Ratnakar, Ms. Soniya Ghosh, Mr. A. Puri, Mr Anshu Gupta, Mr Gaurav Gupta and Mr Siddarth Singh for all their help and inputs.

At WWF-India, I thank Dr Dipanker Ghose, Ms Shaila Sam, Ms Mita Goswami, Dr. Anjana Pant, Ms Gita Warriar, Mr Rohit Kumar Mishra, Ms Karishma Handa and Mr Prithi Pal for all their help on this project. My former colleagues at TRAFFIC India / WWF-India: Mr Samar Singh, ex-Secretary General, WWF-India; Mr Manoj Misra and Mr Ashok Kumar (ex-Directors, TRAFFIC India), Mr Vivek Menon, Ms Fahmeeda Hanfee, Ms Sudha Mohan, Dr. Prakash Rao, Col. N. G. Sitlhou, Mr Rahul Dutta, Mr Rupesh Bhomia, Ms Jossy Sunny, Mr Dinesh Saini, Ms Reena Haorokcham and Ms Manorma Goswami who have always lent me support throughout my work and are gratefully acknowledged.

I thank my present colleagues in TRAFFIC India: Ms Dilpreet Chhabra, Mr M.K.S. Pasha, Mr Akhilesh Kumar, Mr Shubhobroto Ghosh, Mr Dhruva Jyoti Dutta, Mr Pankaj Bakshi and Mr Barun Biswas for their support and useful discussion during this study.

I also thank Mr. Gulshan Malik and his team, Mr. Virender Kumar Cartographer and Mr. Prasanth A.V. artist for their help in production of the support.

Last but not least, I must make special mention of the many indigenous bird trappers who shared their knowledge with me.

Executive Summary

This report focuses on documenting what is known about owls in trade in India; the trapping methods used, utilization patterns and the tribes & communities that are involved. An attempt is made to explain the myths and beliefs that drive the utilization and trade of owls and their body parts.

In India, owls are highly prized and in demand for black magic purposes, despite legal protection under the *Wildlife (Protection) Act, 1972* and their inclusion in Appendix I or Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Although illegal, the trade and utilization of owls is widespread and thus poses a potential conservation threat if carried out at unsustainable levels. Domestic trade in owls is highly lucrative, and owls remain a key target for several tribes connected with the bird trade, several of whom make a living from the owl trade. Amongst tribal communities, there appears to be little appreciation of current wildlife laws, whilst the laws are generally known about but flouted by owl traders.

During the course of this study, owls were encountered in trade at a number of locations around India. However, the sheer size of India (more than 3 million km²) and the existence of many bird markets is a logistical challenge for any investigator and for law enforcement. The investigation was made particularly difficult because of the covert nature of the trade. Ever since the Indian wild bird trade ban, most dealers involved in this trade have become ultra cautious and it required extra effort to uncover relevant information. While it was still possible to obtain verbal information, in most cases it was a difficult task to photograph birds in trade.

Despite the fact that owls are generally not openly displayed or advertised, it was apparent that their trade was reasonably widespread. One possibility is that recent clampdowns on the trade in domesticated birds is causing traditional bird traders and trappers to shift back to trading in wild birds which have a higher value. Owls fit the bill perfectly: due to the number of superstitions and traditions surrounding them within India they are always in demand and, consequently, attract a high premium. Indeed, prices for traded owls have risen considerably since 2002.

A number of recommendations are made to address the illegal owl trade in India. These include stricter monitoring and control on the bird trade, training for enforcement officials, the establishment of rescue/rehabilitation centres for seized owls and discouraging owl taxidermy in private collections. Such measures should be accompanied by a public awareness campaign highlighting the threats posed by illegal owl trade and the rehabilitation of traditional bird trapping communities into alternative sustainable livelihoods.

OBJECTIVES

The aim of this study is to document:

- Illegal trade of owls in India
- Species in trade, volume of trade and major trapping locations of owls
- Tribes and communities involved with the trade and the use of owls in India
- Prices of various species in trade at various levels
- Trapping techniques
- Trade routes
- Seizures (areas / species)
- Superstitions and totems concerning owls in India
- Legislation
- Recommendations to curtail owl trade and utilization



BACKGROUND

Owls: An Overview

Owls are mostly nocturnal birds of prey, feeding mainly on small mammals, but also taking reptiles, insects, birds, amphibians and fish. Their plumage is usually soft and fluffy allowing for silent flight and also generally cryptic so as to camouflage the birds during diurnal roosting. Owls are monogamous, and there is little sexual dimorphism.

Owls live in a variety of habitats, ranging from deserts to forests, and including human habitations in most parts of the world. However, despite their ubiquity they are not easily seen. Most owl species are nocturnal and adapted for hunting at dusk or in the dark. The large eyes of owls, placed on the front of the face like those of a human, are primarily binocular to enable the birds to fix the position of their prey. Owls can turn their heads right round to look behind.

Owls are an essential component of the ecosystem. They feed on small mammals, birds, frogs, lizards and insects and are at the apex of the food chain. Owls hunt by plunging at their prey and clutch it with their hooked talons.

Owls belong to the Order Strigiformes, which is categorized into two families:

- **Family Tytonidae (Barn owls):** Owls from this family have a heart-shaped disk completely encircling the face with a longer and narrower skull than typical owls. The middle toe has a serrated comb on the claw. The legs are relatively long. The clavicles are not separate and not fused to the sternum. Three species of this family are known from India.
- **Family Strigidae (Owls):** Typical owls with a round facial disk. The legs are relatively short. The clavicles are fused to the sternum and there is no comb on the middle claw. These owls have an upright stance, hooked bill and sharp talons with a reversible outer toe. The eyes are forward facing and virtually fixed although the neck is highly flexible. Twenty-seven species of this family are known from India.



Collared Scops-owl

Relationship with man

Since ancient times, humankind has had a special fascination for owls. Owls have a human-like quality that many people find irresistibly endearing, with their large eyes positioned on the front of the head and, in some cases, false “ears” (actually feather tufts). This human-like appearance of owls, combined with their nocturnal habits and haunting calls, invokes fear and superstition among people of many different cultures. Few other groups of birds have spawned such a wealth of diverse and often contradictory beliefs. Across different cultures, owls are sometimes feared or venerated, despised or admired, considered lucky or unlucky, and wise or foolish. Owls are associated with a wide range of myths, folklore and superstitions concerning black magic and witchcraft, prophecy, birth, death and many other natural and unnatural phenomena (Bruce 1999, Marks *et al.*, 1999).

As prime consumers of rodents such as mice and rats, owls can be very beneficial to humans, and the importance of owls to agricultural communities has led to the birds being incorporated into the rituals of farmers. In Kerala, for instance, farmers place tree stumps in their paddyfields when the crops are about to ripen, praying to the Goddess Lakshmi – the Goddess of Wealth – to increase their crop productivity. The stumps act as perches for owls and other raptors that hunt rats and mice in the crop fields.

However, despite their obvious usefulness, myths and superstitions propagated by witch doctors and traditional healers result in owls still being subject to heavy exploitation in India (Ahmed, 2002; H. Taher *in litt.* to TRAFFIC India, 1994). Owls and their body parts are used to treat various ailments (Bruce, 1999; Frost, 2004; Marks *et al.*, 1999). Their meat is considered a potent aphrodisiac (Negi and Palyal, 2007). Parts of owls or their eggs feature in various folk recipes and potions (Behl, 1995 and 1997; Dikshit, undated; Jathar and Rahmani, 2004).



A *Sirha* (a village healer) with his trained Brown Fish-owl

In the *Rigveda* (an ancient Indian sacred collection of Vedic Sanskrit hymns), owls are referred to as *Uluka* and *Khargala*. They are noted for their fearful cries that fortell ill-fortune and are offered as a sacrifice to the trees of the forest. The owl is associated with the goddess Chamunda and appears in iconography as her vehicle from the 5-6th century AD onwards. Yet, interestingly, owls are rarely seen in Indian art. A few owl-like terracotta figurines have been found at Harappa and Inamgaon, although their purpose is unknown, and isolated owl figurines have been discovered at Vaishali (Bihar) and Kaushambhi (Uttar Pradesh) in archaeological levels (Pande *et al.*, 2003).



Goddess Chamunda



Owl mementos sold in Varanasi, Hyderabad and Kolkata

The wild bird trade

Over 450 of the approximately 1300 Indian species have been documented in international and domestic bird trade (Inskipp & Thomas 1976; Inskipp 1983; Ahmed, 2004). The *Wildlife (Protection) Act, 1972* prohibits trade in Indian wild birds. Despite this, the bird business is still prevalent in many Indian cities, small towns and villages.

With more widespread awareness and stricter enforcement of wildlife laws relating to birds, the availability of commonly traded species in the open market has decreased. Former bird exporters, dealers and trappers now focus either on exotic birds or on species that are not openly displayed because of their highly specialized demand, which commands high prices (Ahmed, 1999 and 2002). Domestic trade in owls is highly lucrative, and owls remain a key target for several tribes connected with the bird trade. The protected status of owls is little known by the general public and there is little chance of birds being detected during transportation since captive owls do not generally tend to call or flutter.



Seized Rock Eagle-owl housed at Kanpur zoo, Uttar Pradesh in 2005.

LEGISLATION

All species of owls found in India are protected under the *Wildlife (Protection) Act, 1972* (WLPA). The 1991 amendment to the WLPA bans the trade, trapping and hunting and transport of owls. Apart from owls present in Indian zoos, there are no private captive breeding facilities permitted, and no regulated trade of captive-bred stock is known. The “Exim policy” that controls imports and exports from India bans international trade in all Indian owl species (Anon, 1993). The recently re-discovered Forest Owlet *Heteroglaux blewitti* is listed in Schedule I of the WLPA (fully protected, with stiff penalties for any transgression), while all other owl species are listed in Schedule IV (fully protected, but less severe penalties), under their respective family names Tytonidae and Strigidae (Anon, 1993). Forest Owlet is placed in Appendix I of CITES, while all other species are listed in Appendix II, under their family names (Anon, 1998a).

Prior to the 1991 amendment to the WLPA, a few licenses were issued to travelling zoos and bird dealers owning owls, but these have now been revoked. There is a provision in the WLPA to grant permission for an individual/organization to trap owls for research through the Chief Wildlife Warden of the concerned state. Any person who contravenes any provision of the WLPA is liable to imprisonment for up to seven years, and also a fine up to INR 25 000 (USD 555, using USD 1= INR 45 – for more information on penalties, see Section 51 of the WLPA). Seized owls are either sent to the nearest zoo or Animal Rescue Centres notified by the wildlife officials concerned, who may then release the owls at a later date. Seized owl parts or stuffed specimens are kept in official custody of the state government and are periodically disposed off by incineration.



Rock Eagle-owl offered for sale at Jama Masjid bird market, Delhi

MATERIALS AND METHOD

This report includes information gathered during a nationwide study of the bird trade conducted between 1992–2000 (Ahmed, 2002). The findings are based on first-hand information collected by the author from visits conducted to areas either with a previous bird trade history, or at places where trade was known to be prevalent (Map 1, Page 16). Additional information was gathered between 2001 and 2008. In total, information was obtained on just under 300 visits to bird markets undertaken during the period.

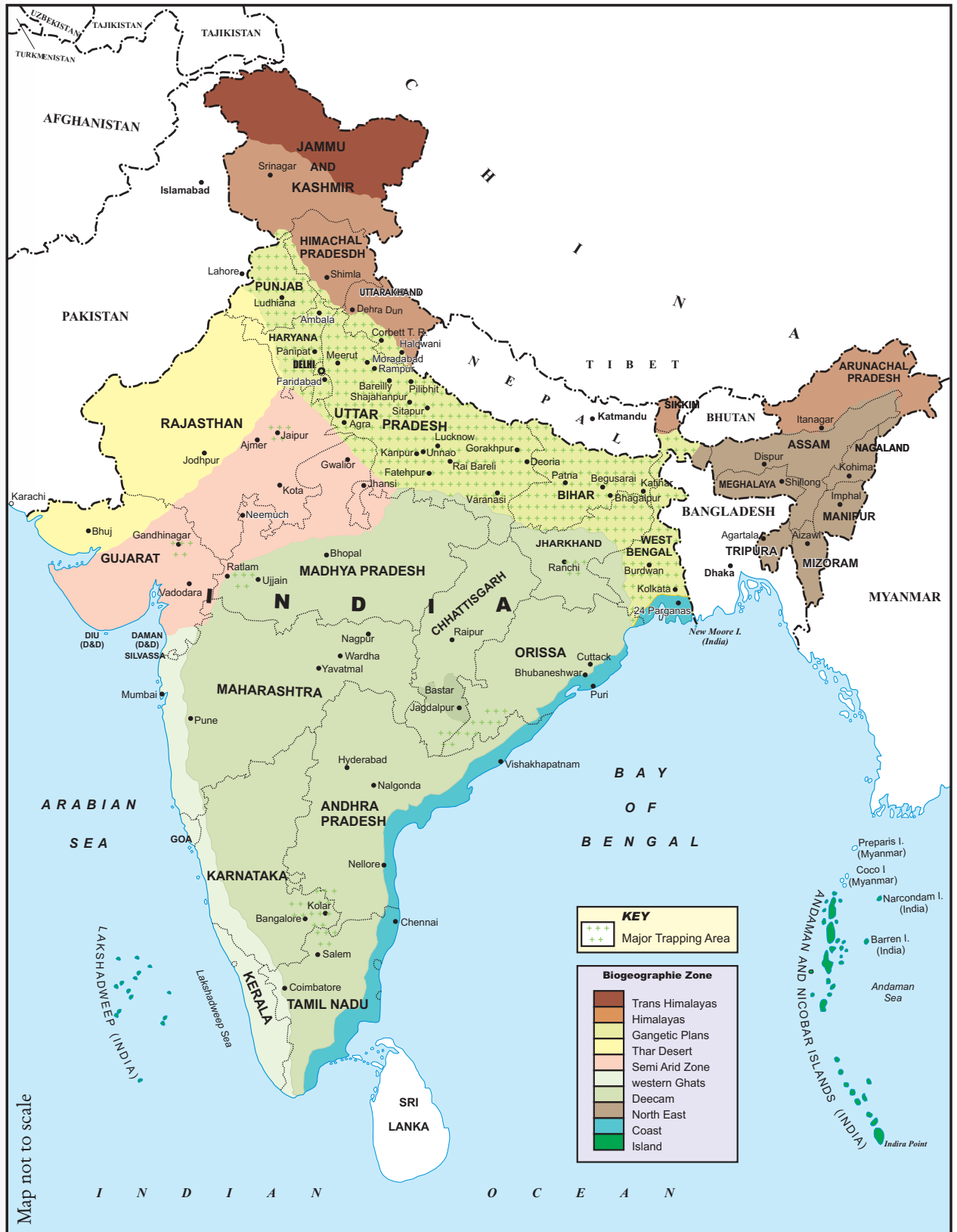
The surveys were carried out covertly and sites were visited at times when seasonal trade was known to be under way—for example, areas in Assam known to trade in Hill *Mynas* *Gracula religiosa* were surveyed during the chick-collection season. No particular route or fixed routine were followed during visits, which were sometimes influenced by gathered local intelligence. The investigation was made particularly difficult because of the covert nature of the trade. Ever since the Indian wild bird trade ban, most dealers involved in this trade have become ultra cautious and it required extra effort to uncover relevant information. While it was still possible to obtain verbal information, in most cases it was a difficult task to photograph birds in trade.

The author visited actual trapping sites, witnessed trapping techniques, and followed these up with trips to the transit and storage areas as well as the actual selling points. The investigations involved interactions with traders, sometimes posing as a buyer and occasionally as a dealer. Seizure data from forest officials, some NGOs, the Central Zoo Authority (CZA), informers/volunteers, media reports and the TRAFFIC India database were also examined. Bookshops and vendors selling books related to black magic were scanned and all relevant literature was reviewed.

Bird names have been referenced from BirdLife International's Species Factsheets (2009) and standardised throughout. However, several forest/wildlife offices still use old publications and former names (both common and scientific) for court cases. Vernacular names have been used from Ali & Ripley (1983) and also recorded from bird traders (Ahmed 1997 and 2002; Anon, 1998).

Owl distribution maps are based from the book: *Birds of South Asia. The Ripley Guide*. Vols. 1 and 2. by Rasmussen, P.C. & Anderton, J.C. (2005). Smithsonian Institution and Lynx Edicions, Washington, D.C. and Barcelona with the first author prior permission. Two owl illustrations have also been taken from the above book.

Map1: Owls trade and trapping areas



THE OWL TRADE IN INDIA

The Indian subcontinent is home to 32 species of owls, 30 of them recorded from India (Ali & Ripley, 1983; BirdLife International, 2009; Grimmet *et al.*, 1999). Thirteen owl species were recorded by this study in the domestic live bird trade (Ahmed, 1997 and 2002), while two more species were reported in trade through seizure data. There are no trade data pertaining to exploitation of owls with restricted distributions in the Andamans & Nicobar Islands or the trans-Himalaya region, but it is likely that owls in the regions may be locally trapped and utilized (Miraj, 2007).

During this study, more than a thousand owls belonging to at least 13 species were recorded. Despite the fact that owls were generally not openly displayed or advertised, it was apparent that their trade was reasonably widespread. One possibility is that recent clampdowns on the trade in domesticated birds is causing traditional bird traders and trappers to shift back to trading in wild birds which have a higher value. Owls fit the bill perfectly: due to the sheer number of superstitions and traditions surrounding them within India they are always in demand and, consequently, attract a high premium. Indeed, prices for traded owls have risen considerably since 2002 (Table 5, Page 38).

Based on the visits and also casual interviews with owl traders and trappers, the mortality among owls in trade appeared to be less than 10%, but because most owls were sold within a week of capture and can survive several days without proper food, mortality rates could not be accurately determined. Nevertheless, once habituated, owls appeared to survive well in captivity.



Spotted Owlet offered at Chowk market near Charminar in Hyderabad

Table 1: Frequency of occurrence of Indian owl species observed in trade
(Based on visits to bird markets by the author between 1992–2008)

Rank	Species	Scientific name	Numbers of individuals observed
1	Spotted Owlet	<i>Athene brama</i>	562–647
2	Barn Owl	<i>Tyto alba</i>	101–106
3	Rock Eagle-owl	<i>Bubo bengalensis</i>	73
4	Jungle Owlet	<i>Glaucidium radiatum</i>	59
5	Collared Scops-owl	<i>Otus bakkamoena</i>	54
6	Brown Fish-owl	<i>Ketupa zeylonensis</i>	27
7	Dusky Eagle-owl	<i>Bubo coromandus</i>	16
8=	Mottled Wood-owl	<i>Strix ocellata</i>	12
8=	Asian Barred Owlet	<i>Glaucidium cuculoides</i>	12
10	Collared Owlet	<i>Glaucidium brodiei</i>	9
11	Brown Wood-owl	<i>Strix leptogrammica</i>	4
12	Oriental Scops-owl	<i>Otus sunia</i>	3
13	Eastern Grass-owl	<i>Tyto longimembris</i>	1 (unconfirmed)

Rank 1 = most frequently observed

133 unidentified owls (or parts of) were observed by the author during the period, including 67 unidentified large horned owl species, a mixed collection of 15–20 Spotted Owlets and Collared Scops-owls, and 51 other unidentified individuals (or parts thereof).

Table 2: Top five owl species preferred by traders in India
(Based on interviews with buyers and tantriks/market surveys/seizure analysis)

Rank	Species	Scientific name
1	Rock Eagle-owl	<i>Bubo bengalensis</i>
2	Brown Fish-owl	<i>Ketupa zeylonensis</i>
3	Dusky Eagle-owl	<i>Bubo coromandus</i>
4	Collared Scops-owl	<i>Otus bakkamoena</i>
5	Mottled Wood-owl	<i>Strix ocellata</i>

Rank 1 = most preferred. *Tantriks* = witch doctors.

Table 3: Principal Indian states and territories where owl trade takes place
(Based on market surveys/interviews with buyers)

Rank	State
1	Uttar Pradesh/Madhya Pradesh
2	West Bengal/Andhra Pradesh
3	Delhi
4	Gujarat
5	Rajasthan/Bihar

Table 4: Principal Indian states and territories where actual trapping of owls takes place
(Based on field visits/interviews with trappers)

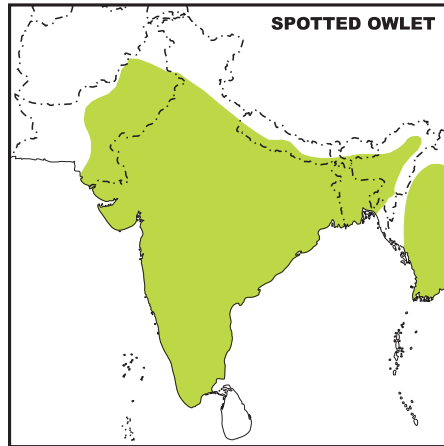
Rank	State
1	Uttar Pradesh
2	Madhya Pradesh/Andhra Pradesh
3	Chhattisgarh/Jharkhand
4	Rajasthan
5	Gujarat/Uttarakhand

The Mottled Wood-owl is one of the most common species recorded in Bastar, Chhattisgarh



OWL SPECIES RECORDED IN TRADE WITHIN INDIA

SPOTTED OWLET *Athene brama*



WPA: IV; CIT ES: II; IUCN Red List status: Least Concern

Trade / local name: *Ghughdi, Khusti, Khaskhudor* (Bird dealers); *Oolloo, Khusattia, Chughad* (Hindi); *Pencha* (Bihar); *Kuture Pecha* (Bengal); *Dang tang pum* (Lepcha); *Chibiru* (Sind); *Pulli andai* (Tamil); *Pingla* (Marathi); *Pagadiganti* (Telugu); *Chibri* (Gujarati).

Field Characters (Ali, 1996): A small, squat, white-spotted, greyish-brown owl, with a large round head and forward-staring yellow eyes.

Length: 21 cm (8 in)

Spotted Owlet is the most widespread owl in India, found around habitated and cultivated areas.

The species was readily available and was the first to be offered to a customer requesting an owl. However, once purchased they were often declared unacceptable by the prescribing black magician, and the same client then sold either a Collared Scops-owl or Barn Owl.

Sometimes Spotted Owlets were dyed (with tea-leaf water, *Acacia catechu* extracts, or lamp-black mixed with mustard oil) and feathers stuck with latex to the head to make the bird appear horned. Red colouring was also sometimes inserted into their eyes to alter their yellow eye colour so they appeared like the larger horned owl species (Ahmed, 1999). The demand for Spotted Owlets through Delhi market resulted in extensive trapping of birds from nearby areas, particularly in Meerut and Lucknow (Uttar Pradesh).

Surveys in 1996 revealed that traders from the Jama Masjid market in Delhi regularly supplied consignments of 40-50 birds every week to an unknown user, said to be a Kashmiri pundit. Spotted Owlets were widely used by taxidermists as biological specimens for use in zoology classes. About 20 such specimens illegally procured from laboratory suppliers were recorded on display in various colleges and universities.

The species has also been favoured by some communities for food, such as the Baheliya tribe, the Gonds of Central India and the Munda tribe in the Bastar area (Kirkpatrick, 1954).



Spotted Owlet



Dyed Spotted Owlet with coloured eyes



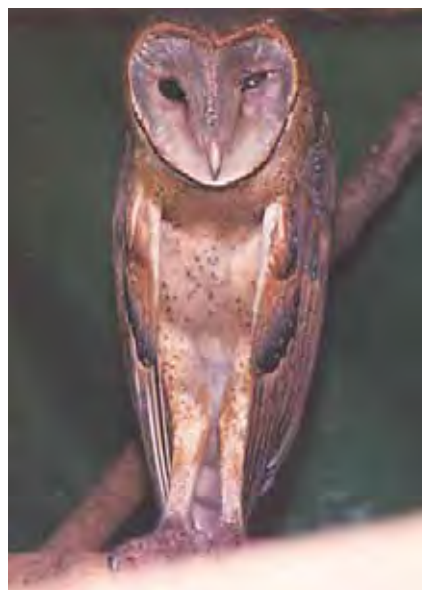
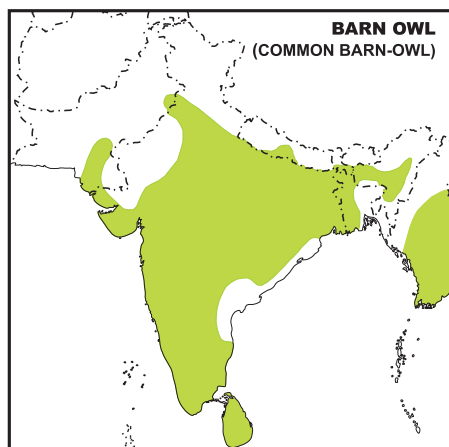
Dyed Spotted Owlet

During the course of this study this species was the most commonly observed owl in trade (making up more than 50% of witnessed owls), but was the species least sought-after by buyers. Trade appeared to peak around the Diwali and Holi festive months in northern India.



Spotted Owlet offered at Nakhas market, Lucknow, Uttar Pradesh

Barn Owl *Tyto alba*



WPA: IV; CITES: II; IUCN Red List status:
Least Concern

Trade/Local names: *Madoosa* (Mirshikars, Bihar); *Rustak* (Bahelias, Uttar Pradesh, Uttarakhand); *Kuraya, Karail, Biuri churi, Badar Muh* (Hindi); *Laskhmi pecha, Ma Loki pecha* (Bengal); *Chavu kuruvi* (Tamil); *Ghubad or Ghuvad* (Marathi); *Revi devi* (Gujarat); *Veli munga* (Malayalam); *Ghughu* (Madhya Pradesh); *Chao pitta* (Telugu)

Field Characters (Ali, 1996): A pale owl, golden buff, and grey above finely stippled with black and white; silky white tinged with buff and normally spotted dark brown. Large round head with a conspicuous ruff of stiff feathers surrounding a white monkey-like facial disc.

Length: 36 cm (14 in)

Although in low demand by black magic practitioners, the Barn Owl is nevertheless still caught in large numbers in some states such as West Bengal, Assam and Orissa. Barn Owls are reasonably easy to trap because of their relative tameness and tendency to perch on electricity pylons and other exposed perches. They are trapped by the latex and bamboo method or by using mice as bait (See TRAPPING TECHNIQUES, Page 57). On the Assam-Bangladesh border, trappers catch Barn Owls using a wire mesh encased cage with a protruding wooden platform placed in the forest containing a female Barn Owl. Wild males alight on the platform and trigger an umbrella net that captures them.

Often trappers and traders are paid by local people to remove Barn Owls from their old buildings and storage shelters. These birds are often traded rather than being released elsewhere.

In Nepal, the fresh meat and bones of Barn Owls are highly prized for their curative use in paralysis, rheumatism and gout (Shrestha, 2000). In India and elsewhere, this species is prescribed in potions, and parts of owls or their eggs used in various folk remedies (Bruce, 1999).

In Kolkata and other districts of West Bengal, and states such as Assam, Orissa and Tripura with a large Bengali population, buyers often requested white-coloured owls such as Barn Owls. Elsewhere, larger, horned owls were preferred. It was reported to the author that up to INR 2 00 000 had been offered for a pure white owl in Kolkata.

In Guwahati and surrounding areas of Assam, there is a superstition that trappers of Barn Owls do not bear sons and consequently few trappers catch them (Vivek Menon, *in litt.* to TRAFFIC India, April 1993).

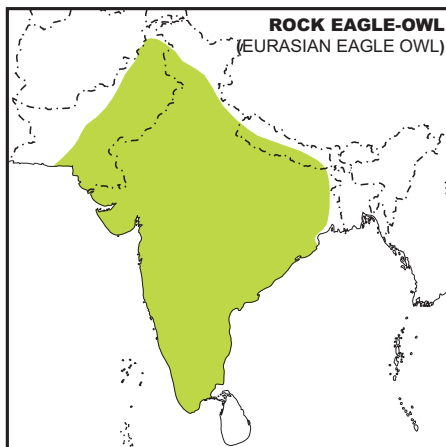
During this study it was the second most commonly observed species in trade, including several dead specimens displayed by mendicants on the roadside, especially in the states of Madhya Pradesh and Rajasthan. The majority of live Barn Owls observed during the study were recorded from Lucknow bird market in Uttar Pradesh, followed by Delhi, Kolkata in West Bengal and Hyderabad in Andhra Pradesh.

In October 2007, officers of the Border Security Force in Murshidabad, West Bengal, seized a consignment of Barn Owl body parts en route from India to Bangladesh. On questioning, it was found that Barn Owl eyeballs, skin and feather roots were to be used for preparing medicines by *hakims* (traditional healers) practicing Unani medicine in Bangladesh (Chaudhuri, 2007).



Ma Lokhi (Goddess Lakshmi)

Rock Eagle-owl *Bubo bengalensis*



WPA: IV; **CITES:** II; **IUCN Red List status:** Least Concern



Trade/Local names: *La-lakhanka* = *Lal ahke wala ulu*, *Barbka* (Bird dealers); *Oog-pa* (Ladakh); *Ghughu* (Hindi); *Gug* (Sind); *Hutom pecha* (Bengal); *Komban andai* (Tamil); *Ghubad* (Marathi); *Komban moonga* (Malayalam); *Ghubad* (Gujarati); *Yerra gudla guba* (Telugu).

Field Characters (Ali, 1996): A large dark brown owl, streaked and mottled with tawny buff and black, with two prominent blackish "horns" or ear tufts, large forward facing orange eyes, and fully feathered legs. This species has formerly been treated by some authors as a race of Eurasian Eagle-owl, *B. bubo*.

Length: 56 cm (22 in)

The Rock Eagle-owl is a widespread resident inhabiting cliffs, rocky hills, ravines and wooded areas and is persecuted throughout its range. Birds are caught either using the mice and latex or latex-bamboo method. Professional owl trappers target birds in the summer months when the owls quickly become tired from constant flushing and are then easily caught using latex glue. Captive birds are fed on House Crows *Corvus splendens* and Rose-ringed Parakeets *Psittacula krameri*. In places with a high density of bird trappers such as in Meerut district in Uttar Pradesh, the species has been largely wiped out due to extensive capture.

The Rock Eagle-owl has a life span of more than 10 years and birds are commonly exhibited in Indian zoos. Most of them were bought from bird dealers or obtained through seizures. During this study, it was discovered that a mini zoo in Haryana had purchased a pair from an illegal trader.

In northern India the major collection areas of this, and other large, horned owls were around Lucknow and Kanpur, particularly Rai Bareilly, Gambhirpura, Sandhi, Unnao, Bhargamo and Kherabad in Uttar Pradesh. Extensive trapping also took place in Bhadarabad (Haridwar) and Haldwani districts in the state of Uttarakhand. The trapped owls reached Delhi market via Meerut and Moradabad (Uttar Pradesh).

In the east (see Map 2), the major collection areas are around Begusarai, Manjhol, Siwan in Bihar and Ranchi in Jharkhand and the birds transported to Patna (Bihar) or Kolkata (West Bengal). In peninsular India, most trapping takes place in and around Jhansi and Orai (Uttar Pradesh), Gwalior and Orchha (Madhya Pradesh), Nagpur and Wardha (Maharashtra), with a major centre in Hyderabad in Andhra Pradesh. Birds trapped from Vellore, Ambur, Honsur, Villipuram, Salem and Madurai in Tamil Nadu are transported to Chennai (Tamil Nadu) and Bangalore (Karnataka) markets. The Kalandars tribe collects large, horned owls near the Shadhol-Indore-Katni-Bilaspur belt and also near Saranda forest in Jharkhand.

During the present study Rock Eagle-owl was the third most frequently observed species and the species the most highly prized in the Indian owl trade. In January 2001, 40 captive chicks of large, horned owls were recorded in a Kalandar settlement in Korai village, near Fatehpuri, Agra in Uttar Pradesh. The majority (over 60%) were Rock Eagle-owls (see ANNEXURE I, Page 70).

Undercover investigations in Patna (Bihar) and Siliguri and Kolkata (West Bengal) suggested some cross-border traffic of this species took place between Kolkata (India) and Dhaka (Bangladesh) and between Patna and Raxual (Bihar, India) and Kathmandu (Nepal) (see Map II). Sakhya (1995) reported owl trade in Nepal, and suggested owls were brought to Kathmandu from Kolkata. Kalandars with trained large, horned owls were recorded in Kathmandu and Pokhara, Nepal, by the author in 1996 and 2000.



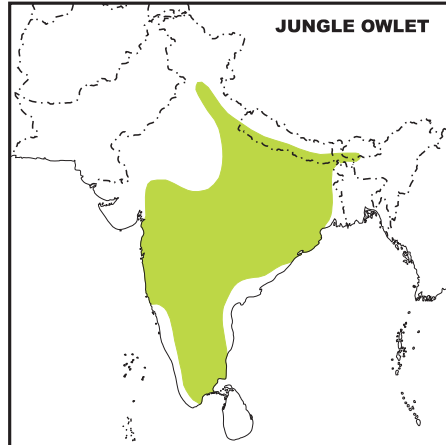
Rock Eagle-owl

Dyed Spotted Owlet to resemble a larger, horned owl such as a Rock Eagle-owl. In this specimen the head feathers are made to appear like small ear-feathers. The false ears are made by applying latex from *Ficus* tree and shaped as erected owl's ears. The body feathers are coloured orangish to make the owl resemble the plumage of a juvenile



Rock Eagle-owls handled during a raid in Orai (Uttar Pradesh) in a Kalandar settlement

Jungle Owlet *Glaucidium radiatum*



WPA: IV; CITES: II; IUCN Red List status: Least Concern

Trade/Local names: *Kala khusat*, *Jangli choghad* (Hindi); *Lal chogadi* (Bird dealers – Uttarakhand and Uttar Pradesh); *Punchi bassa* (Sinhala); *Sina andai* (Tamil); *Chmban nathe* (Malayalam); *Adavi pagadigante* (Telegu).

Field Characters (Ali, 1996): Appearance similar to Spotted Owlet, but dark brown above and conspicuously barred (not spotted) with pale rufous. Underparts rufous and white, closely barred with blackish brown.

Length: 20 cm (8 in)

The Jungle Owlet is a widely distributed species found in tropical and sub-tropical forests. The species is caught for use as a decoy to trap other birds and for sale for use in black magic. Birds are trapped in the states of Chhattisgarh and Uttarakhand (Kumaon and Garhwal regions) for use as a decoy, while in trade they were recorded for sale throughout eastern Uttar Pradesh, Jharkhand, Bihar and Hyderabad (Andhra Pradesh). In the tribal belt of central India, this species is widely exploited and used as a decoy by the Munda, Maria, Muria, Bhil and Ghond tribes. Jungle Owlets are also collected and sold for food and other purposes in Assam, especially by the Karbi tribe, who harvest the chicks each year from May to July and raised them on a diet of insects.

During this study the Jungle Owlet was the fourth most commonly encountered owl species in trade.



A tribal in Madhya Pradesh with his decoy Jungle Owlets fully-fledged chicks that will be to be used as a trapping tool

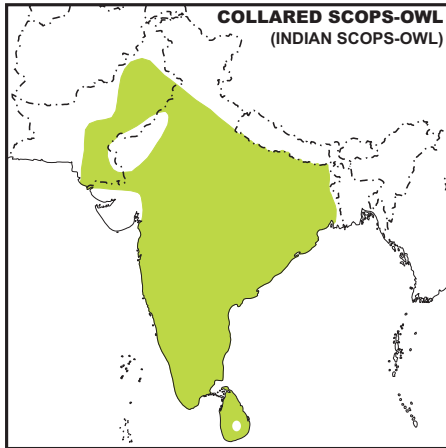


Small sized owl chicks are raised on diet of termites and crickets



Sometimes the chicks are kept surrounded by lhasa (latex) coated twigs to capture parent owls which come to rescue or feed the chicks

Collared Scops-owl *Otus bakkamoena*



WPA: IV; **CITES:** II; **IUCN Red List status:** Least Concern

Trade/Local names: *Kanuti* = *Kanwala ulu*

(Uttar Pradesh and Uttarakhand bird dealers); *Tharkavi choghad* (Hindi); *Pedda chitta guba* (Telugu); *Punchi bassa* (Sinhala); *Sinna andai* (Tamil); *Nethe* (Malayalam); *Lattya kusyal* (Nepal).

Field Characters (Ali, 1996): A small “horned” owlet, grey-brown or rufous-brown above, with whitish vermiculations and mottling. A pale half-collar on the upper back. Chin and throat buffy white, the latter barred and stippled with black. Underparts buff streaked with black and fine wavy reddish brown bars.

Length: 23-25 cm (9-10 in)

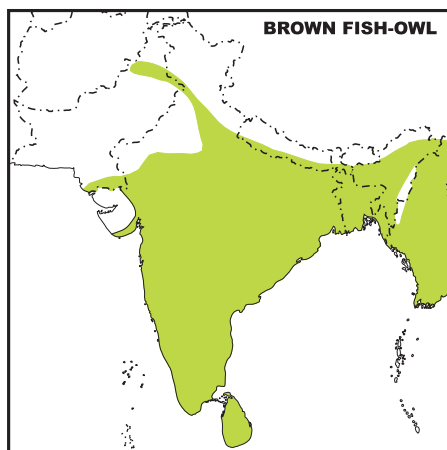
A widespread species that is regularly trapped throughout its range in fair numbers and sold as a miniature “horned” owl. Collared Scops-owl spends the day in thick foliage, but is an easy target for trappers since it roosts low, sometimes down to 2m. Although not as desirable as the large, horned owl species, Collared Scops-owl is still popular in trade due to its short ears, and was ranked fourth in terms of preference.

During this investigation, this species was the fifth most commonly observed in trade. On several occasions during April in northern India, the author was shown fully-fledged chicks and adults which trappers said were a by-catch from collection of parakeet *Psittacula* spp. chicks.



A couple pose with an evening's catch for food that includes a Collared Scops-owl and Grey Hornbill in Gaya, Bihar

Brown Fish-owl *Ketupa zeylonensis*



WPA: IV; **CITES:** II; **IUCN Red List status:** Least Concern

Trade/Local names: *Hunhuna* (bird dealers) *Amrai ka ghughu*, *Ullu* (Hindi); *Bhootoom pecha* (Bengal); *Hoodoo* (Assam); *Kooman* (Malayalam); *Machhimar ghuvad* (Gujarati).

Field Characters (Ali, 1996): A large rufous-brown “eared” owl, with unfeathered legs. The underparts are pale with dark vertical streaks, especially across the breast. Feather tufts project above the head like long ears. Large round yellow eyes.

Length: 56 cm (22 in)

The Brown Fish-owl is a commonly traded, widespread species, sharing similar habitats to the Dusky Eagle-owl. Birds are trapped either by the bamboo and latex method or by the hanging nets often used for parakeets. Nets are hung near the tree canopy where the owl is lured through distress calls of a parakeet or an Asian Pied Starling *Sturnus contra*. Trappers report this species is not wary and is easily caught in groves of *Mahua* trees. Sometimes snake charmer tribes, such as the Kalbeliyas and Jogis, use snakes as bait to trap these birds, although the precise method of capture is unknown, but probably involves a leg hold of some kind.

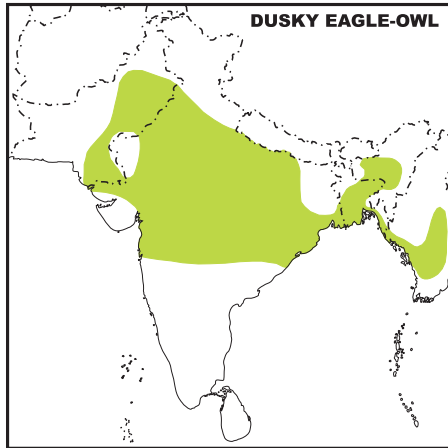
Substantial numbers of Brown Fish-owl chicks are collected by Kalandars and other tribes and trained to perform the act of purification of amulets or “*tabiz*” during street performances. The birds and their body parts are also used in black magic, whilst in Assam, Brown Fish-owls are persecuted by fish farm owners to protect their stock (Choudhury, 2000).



The Brown Fish-owl was the second most preferred species in trade, but ranked sixth in terms of numbers observed during this study.

Seized Brown Fish-owl soon died as they were packed in gunny bags with their legs tied. They were transported on bus tops on bumpy-roads, packed for several hours in inhumane conditions to prevent detection. Prior to the ban in 1990-91 they were traditionally transported in cages with food and water booked through railways.

Dusky Eagle-owl *Bubo coromandus*



WPA: IV; **CITES:** II; **IUCN Red List status:** Least Concern

Trade/Local names: *Burmunda*, *Burmura* (north Indian bird dealers); *Jangli ghughu* (Hindi); *Radio ghuvad* (Gujarati).

Field Characters (Ali, 1996): Superficially similar to Rock Eagle-owl but greyer or sooty with paler yellow eyes. When perched, the horns stand erect close to each other. Also known as Dusky Horned Owl.

Length: 58 cm (23 in)

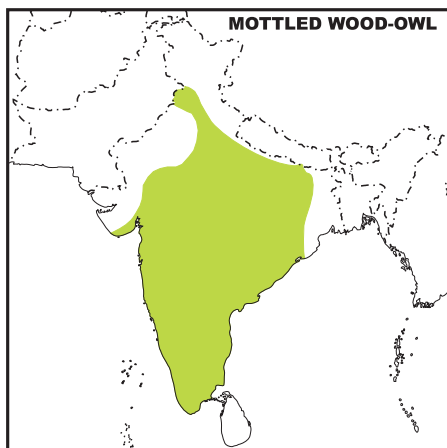
This widespread northern species is found in well-watered areas with extensive tree cover. Birds are caught by the latex and bamboo method, with at least one trapper known to use either a Jungle or Spotted Owlet as a decoy instead of mice as bait.

Dusky Eagle-owls retailed for the same price as Rock Eagle-owls, but were slightly less favoured because of their yellow, not orange eyes, (although traders often claimed this was because the birds were still immature). The Dusky Eagle-owl was the seventh most frequently recorded species in trade but ranked third in preference among owl traders and customers.



Spotted Owlet used as a lure to capture larger, horned owls

Mottled Wood-owl *Strix ocellata*



WPA: IV; **CITES:** II; **IUCN Red List status:** Least Concern

Trade/Local names: *Chipariya* (bird dealers); *Girmari ghuwad* (Gujarati); *Kollikuravan* (Malayalam).

Field Characters (Ali, 1996): A medium-sized vermiculated reddish brown owl without ears-tufts. The facial disc is white with fine concentric black bars. The throat is white, stippled chestnut and black, and there is a white half collar on the foreneck.

Length: 48 cm (19 in)

Mottled Wood-owls are found in peninsular India inhabiting open wooded areas, groves around villages and in cultivated areas. Like the Jungle Owlet, this species is exploited by certain tribes for use as a decoy. Parts of this owl are used in black magic and sorcery. In the Bastar area of Chhattisgarh, Mottled Wood-owl chicks are hand-raised, especially by members of the Muria and Maria tribes who trap Greater Racket-tailed Drongos *Dicrurus paradiseus* using this owl as a decoy. Tail feathers of the Greater Racket-tailed Drongo are an important part of the dance costume of the tribes (Ahmed, 2002).

During this study a total of 12 owls were recorded: three live specimens seen during two visits to the Mobinpura area in Nagpur (Maharashtra), and nine specimens recorded in Bastar (Chhattisgarh).

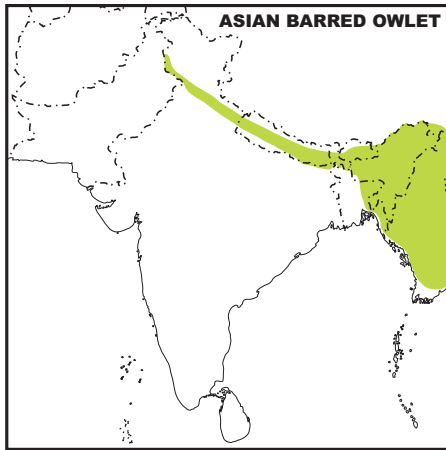


Muria dancer with drongo tail feathers



Setting a trap for forest birds using owl as a lure

Asian Barred Owlet *Glaucidium cuculoides*



WPA: IV; **CITES:** II; **IUCN Red List status:** Least Concern

Trade/Local names: *Phari Chughad* (Bird dealers); *Bada dundul* (Hindi); *Tanpum* (Lepcha)

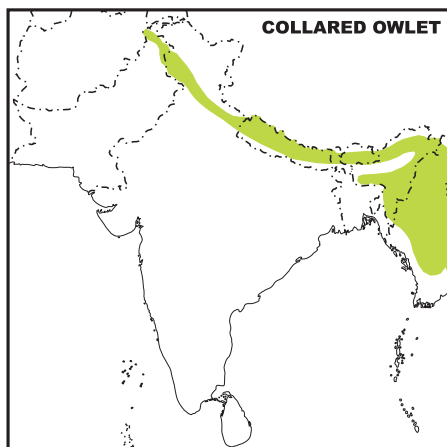
Field Characters (Ali, 1996): Resembles Jungle Owlet but larger. A dumpy “hornless” dark brown owlet, closely barred with whitish above and below. The abdomen is whitish with longitudinal dark striations. There is a prominent white throat-patch.

Length: 23 cm (9 in)

Distributed in the Himalayas and north-east India in tropical, sub-tropical and temperate forests. Often found in mango groves in hills, this species is trapped for live bird sales and sometimes for local consumption. This species is seldom utilized for trapping other birds as it is less mobbed by small passerines which are the main target for the trappers. Bird trappers sometimes dye the Asian Barred Owlets brown (using the tree *Acacia catechu*) to make them resemble Jungle Owlets which are considered as better decoy birds. Asian Barred Owlets are usually sold as an alternative to Collared Scops-owls, but the lack of “ear tufts” makes them a less popular choice.

During this study, 12 individuals were recorded in trade between 1995 and 2006, in Haldwani and Kathogodam in Nainital and Sukhi Dhang in Pithoragarh district of Uttarakhand and also at Pilibhit in the state of Uttar Pradesh.

Collared Owlet *Glaucidium brodiei*



WPA: IV; CITES: II; IUCN Red List status: Least Concern



Trade/Local names: *Char aak-wali chokdi* (Baheliya trappers - Uttar Pradesh / Uttarakhand); *Dao whit-whit* (Cachar).

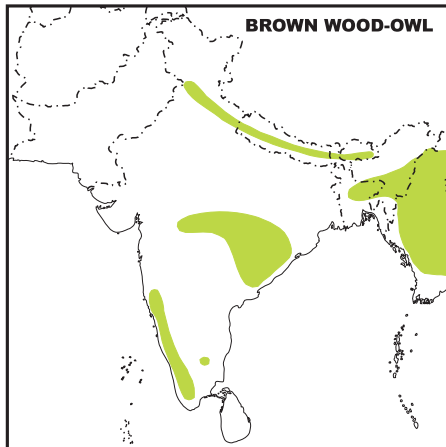
Field Characters (Ali, 1996): A charming diminutive owl, barred grey-brown with a prominent white supercilium, rufous half-collar on the upper back, and a white patch on the throat. From behind, the neck collar with black spots each side looks deceptively like an owl's face and the species is often referred to as the four-eyed owl.

Length: 17 cm (6.5 in)

The Collared Owlet is the smallest owl found in India and is distributed in the Himalayas and north-east India. The species is rarely sold in retail markets but is usually traded between trappers. Trappers say Collared Owlets are the most frequently mobbed owl, hence they are often used as a decoy to catch other bird species. The Baheliya and Bhatyara hill bird trappers use Collared Owlets to capture Red-billed Leiothrix *Leiothrix lutea*, Silver-eared Mesia *L. argentauris*, Black-chinned Yuhina *Yuhina nigrimenta* and Blue-winged Minla *Minla cyanouroptera*.

A total of nine specimens were recorded at four locations in Uttarakhand during the present study.

Brown Wood-owl *Strix leptogrammica*



WPA: IV; CITES: II; IUCN Red List status:
Least Concern

Trade/Local names: *Mik dab bru* (Lepcha);
Kollikkuravan (Malayalam); *Sun ulu sorai* (Assam); *Bulaka* (Nepal).

Field Characters (Ali, 1996): A large chocolate-brown owl with close-barred underparts and a prominent white supercilium. Face disc white in the Himalayan race and rufous in the peninsular race. Tail tipped white. A white patch on the throat.

Length: 53 cm (21 in)

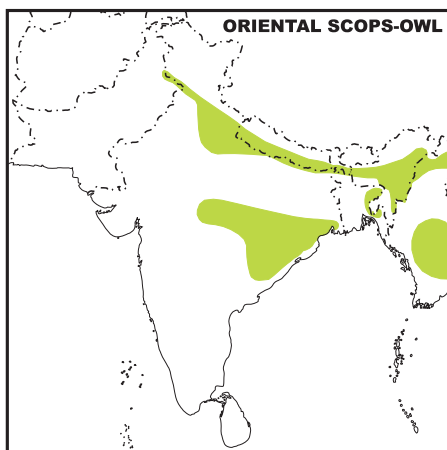
A large species, found in the Himalayas, north-eastern India, and the Eastern and Western Ghats.

Two specimens were recorded in Haldwani in Nainital district (Uttarakhand) in 2005 and another specimen in Dimapur, Nagaland, in 2008.

Choudhury (2001) also recorded the sale of a Brown Wood-owl in Kohima market, Nagaland.

Not much is known about its trade.

Oriental Scops-owl *Otus sunia*



WPA: IV; CITES: II; IUCN Red List status: Least Concern

Trade/Local names: *Lal-wali kanuthi* (bird dealers); *Dundul* (Himachal Pradesh); *Choghad kusial*, *Sunya kusial* (Nepal).

Field Characters (Ali, 1996): A small slim owl with ear tufts and feathered legs. Delicately vermiculated greyish-brown plumage, varying in shade.

Length: 19 cm (7.5 in)

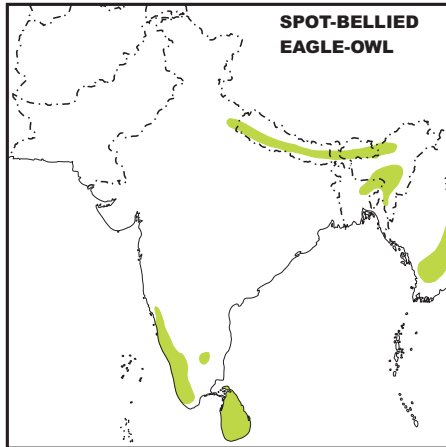
Distributed in forest and wooded areas of the Himalayas, north-east, western and southern India, this species is quite rare in trade. Trappers in western Uttar Pradesh and Bihar say this species is more often caught accidentally than deliberately, often when the bird is disturbed during the day or sighted while being mobbed by small birds. Otherwise the species hides effectively and is difficult to locate.

Only three Oriental Scops-owls were recorded for sale—in Uttar Pradesh and Bihar—during the course of this study (in 1999, 2001 and 2006).



Owl chicks recorded for sale in a village market in Assam in 2009

Spot-bellied Eagle-owl *Bubo nipalensis*



WPA: IV; **CITES:** II; **IUCN Red List status:** Least Concern

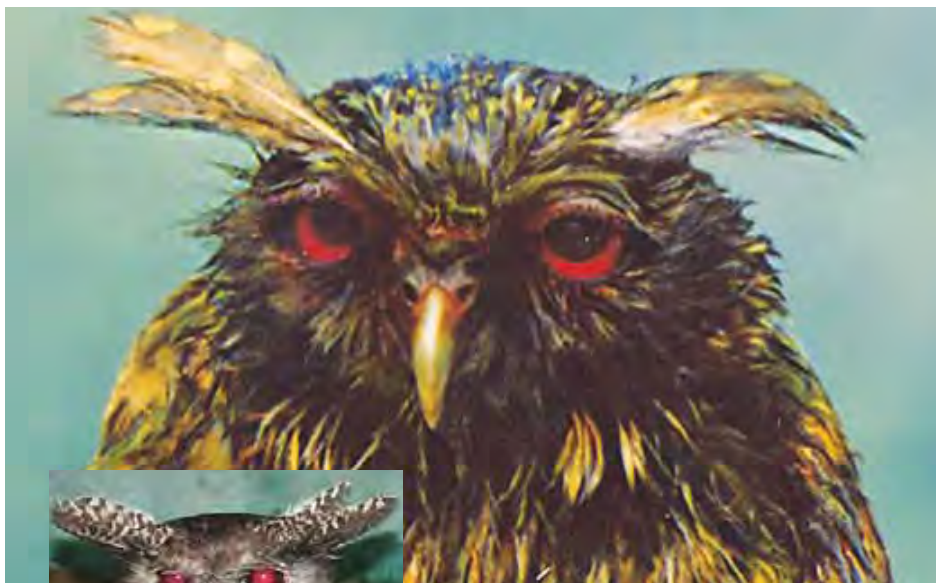
Trade/Local names: *Huhu*, *Huhu cheel*

(Nepal); *Migdori* (Bhutia); *Umman*, *Kattu munga* (Malayalam); *Dao bu gao deba* (Cachar).

Field Characters (Ali, 1996): A large, powerful, nocturnal brown owl with two outwardly slanting erect black and white ear-tufts, fully feathered legs, and brown eyes. The species is also sometimes known as Forest Eagle-owl.

Length: 63 cm (25 in)

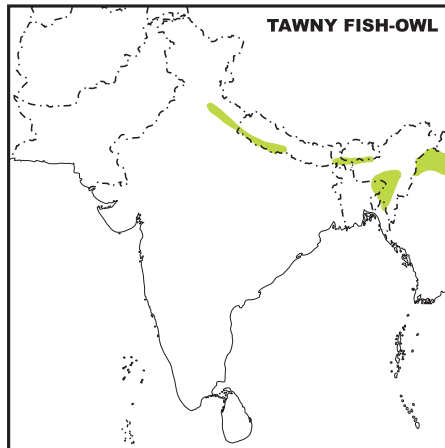
Found in the Himalayas, north-east India and the Western Ghats in dense forest areas, this species has rarely been recorded in the bird trade. Gupta and Rathinasabapathy (1998) recorded a single specimen on sale for INR 150 in Coimbatore (Tamil Nadu) bird market.



Spot-bellied Eagle-owl

Dyed Spotted Owlet to give an appearance of a larger, horned owl. Note the red colour inserted in the owl's eyes. This is because red or orange coloured eyes in owl are preferred by buyers. Also the change of eye colouring makes the owl appear different from the commonly seen Spotted Owlet. The applied ear-feathers make it look remarkably different from the original species

Tawny Fish-owl *Ketupa flavipes*



WPA: IV; **CITES:** II; **IUCN Red List status:** Least Concern

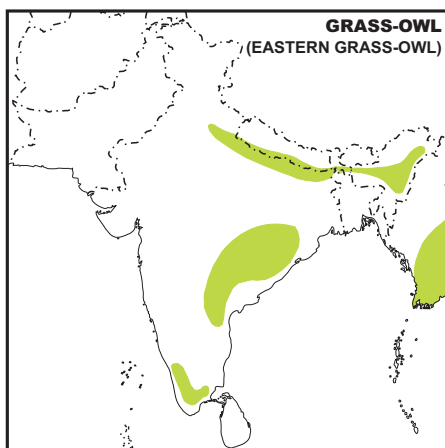
Trade/Local names: *Lak kyo-o mung* ('the kyo-o calling devil' - Lepcha); *Dao hao ho ho*, *Dao bu gao* (Cachar).

Field Characters (Ali, 1996): As Brown Fish-owl, but upperparts rich orange-rufous or tawny with broad blackish shaft-stripes. Much buff on the scapulars and wing-coverts. Wings and tail-quills dark brown with buff bars and tips. Below, rich orange-rufous with dark brown shaft-stripes, broadest on the breast, and usually a white throat patch.

Length: 61 cm (24 in)

Although a resident species in the Himalayas and north-east India, the Tawny Fish-owl was not recorded during this survey. However, one individual was seized in Delhi during 2005.

Eastern Grass-owl *Tyto longimembris*



WPA: IV; **CITES:** II; **IUCN Red List status:** Least Concern

Trade/Local names: *Ghas ka ullu* (Hindi); *Sun ulu sordi* (Assam)

Field Characters (Ali, 1996): Very similar to Barn Owl but found only in grasslands. Dark brown above spotted with white, underparts white with scattered brown spots. Facial disc white or pinkish white bordered by a brown ruff. A prominent black spot below each eye, and long legs heavily feathered.

Length: 36 cm (14 in)

This species is found in the terai belt of northern India and in the south-west, where trappers say it mostly gets captured accidentally in family groups during the winter months in hanging nets that are set for francolins and parakeets near grasslands.

During this study there was only one unconfirmed trade record from Lucknow bird market, in 2004.

Choudhury (2001) recorded Eastern Grass-owls for sale in Kohima market, Nagaland.

Other owl species in India

The following owl species are known from India, although none were recorded in trade during this study. All are CITES listed in Appendix II, except Forest Owlet, which is listed in Appendix I. Andaman Scops-owl and Andaman Hawk-owl are classified by the IUCN as Near Threatened, Nicobar Scops-owl as Data Deficient, and Forest Owlet as Critically Endangered.

Oriental Bay-owl *Phodilus badius*
Andaman Scops-owl *Otus balli*
Mountain Scops-owl *Otus spilocephalus*
Pallid Scops-owl *Otus brucei*
Nicobar Scops-owl *Otus alius*
Eurasian Eagle-owl *Bubo bubo*
Buffy Fish-owl *Ketupa ketupu*
Tawny Owl *Strix aluco*
Hume's Owl *Strix butleri*
Little Owl *Athene noctua*
Forest Owlet *Heteroglaux blewitti*
Boreal Owl *Aegolius funereus*
Brown Hawk-owl *Ninox scutulata*
Andaman Hawk-owl *Ninox affinis*
Long-eared Owl *Asio otus*
Short-eared Owl *Asio flammeus*



Forest Owlet

Table 5: Market prices of owls in the Indian bird trade (1USD=45 INR approx.)

ENGLISH NAME	SCIENTIFIC NAME	Prices at Level I: Trapper to Sub-dealer (prior to 2002)	Prices at Level II: Dealer to Consumer (prior to 2002)	Prices at Level I: Trapper to Sub-dealer (2003–2008)	Prices at Level II: Dealer to Consumer (2003–2008)
Barn Owl	<i>Tyto alba</i>	100 – 300	300 – 2000	150 – 350	300 – 3000
Eastern Grass-owl	<i>Tyto capensis</i>	100 – 300	300 – 2000	150 – 350	300 – 2000
Collared Scops-owl	<i>Otus bakkamoena</i>	100 - 350	300 – 3000	300 – 600	300 – 3000
Oriental Scops-owl	<i>Otus sunia</i>	150 - 400	350 – 1500	350 – 1500	350 – 1500
Rock Eagle-owl	<i>Bubo bengalensis</i>	400 – 1500	2000 – 20 000	1000 – 3000	3000 – 40 000
Dusky Eagle-owl	<i>Bubo coromandus</i>	400 – 1500	2000 – 20 000	1000 – 3000	3000 – 40 000
Brown Fish-owl	<i>Ketupa zeylonensis</i>	400 – 1500	2000 – 20 000	1000 – 3000	3000 – 40 000
Collared Owlet	<i>Glaucidium brodiei</i>	100 – 350	Not obtained	500	Not obtained
Jungle Owlet	<i>Glaucidium radiatum</i>	50 – 150	100 – 1000	100 – 300	200 – 1000
Asian Barred Owlet	<i>Glaucidium cuculoides</i>	150 – 300	200 – 1500	200 – 1500	200 – 1500
Spotted Owlet	<i>Athene brama</i>	50 - 100	150 – 2000	150 – 500	200 – 3000
Mottled Wood-owl	<i>Strix ocellata</i>	300 – 500	300 – 2000	300 – 1000	500 – 3000
Brown Wood-owl	<i>Strix leptogrammica</i>	300 – 500	300 – 2000	300 – 1000	500 – 4000

Note: The prices indicated are all in Indian rupees and are based on information from organised bird-trade markets of adult birds/fully-fledged chicks. Prices can be much lower from local tribal trappers, and much higher in some cities.



Table 6: Major markets/localities with estimated minimum annual turnover of 20 000 to 50 000 wild birds, including owls

Name of trade locality	District	State
Mirshikar toli	Patna	Bihar
Kanta toli	Ranchi	Jharkhand
Baheliya toli	Varanasi	Uttar Pradesh
Chowk market – Nakhas	Lucknow	Uttar Pradesh
Nakhas kona	Allahabad	Uttar Pradesh
Bhoor choraya	Moradabad	Uttar Pradesh
Kumar mohalla –Gurdwara road	Meerut	Uttar Pradesh
Chirimar mohala	Ambala	Haryana
Mehboob Chowk & Pardi-wara	Hyderabad	Andhra Pradesh
Chiriya Baazar, Jama Masjid, opp Red Fort	Delhi	Delhi
Vagri basti, Dilli Darwaza	Ahmedabad	Gujarat
M. J. Phule Market	Mumbai	Maharashtra
Jehangirabad / Bhairagarh	Bhopal	Madhya Pradesh
Matia bruz / Narkul danga	Kolkata	West Bengal
Horrak danga / Dubraj diggi	Burdwaan	West Bengal
Thoria sahi	Cuttack	Orissa
Russel market	Bangalore	Karnataka
Pakshirajapuram*	Hosur	Karnataka
Old iron market behind Moore market	Chennai	Tamil Nadu
Tamil Sangam market	Madurai	Tamil Nadu
Gudyari	Raipur	Chattisgarh
Shikari basti, Ramganj*	Jaipur	Rajasthan

* Turnover estimated lower than 20 000 birds, but an important owl-trading centre

Map not to scale

The map displays the following states and union territories of India: Jammu and Kashmir, Himachal Pradesh, Punjab, Haryana, Rajasthan, Gujarat, Maharashtra, Madhya Pradesh, Uttar Pradesh, Bihar, Jharkhand, West Bengal, Orissa, Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Arunachal Pradesh, Nagaland, Assam, Meghalaya, Tripura, Mizoram, and Manipur. Major cities marked include Srinagar, Delhi, Jaipur, Ahmedabad, Mumbai, Pune, Hyderabad, Bangalore, Chennai, Kolkata, and New Delhi. Red arrows show a complex network of connections between these cities, often following major transportation routes. Surrounding countries and regions include Pakistan, Afghanistan, Tajikistan, Uzbekistan, Turkmenistan, China, Nepal, Tibet, Bhutan, Bangladesh, Myanmar, and Sri Lanka. Bodies of water shown are the Arabian Sea, Bay of Bengal, and the Andaman Sea. Islands like Lakshadweep, Andaman, and Nicobar are also labeled.

SEIZURES

With increasing public awareness about the illegality of the wild bird trade, especially in Indian metropolitan cities, wildlife seizures are reported more prominently than previously. The release of TRAFFIC India's bird trade reports in 1997 and 1999, along with the sensitizing and training workshops carried out at the time have had a major impact on the awareness of the issue of bird trade amongst various government agencies. Several animal welfare organizations such as People for Animals (PFA) and People for Ethical Treatment of Animals (PETA) have taken up this issue as a priority. Both organizations have regularly monitored some bird markets and their information has led to several bird seizures and arrests.

Seizures between 1995 and 2002 included a minimum of 21 owls belonging to five species seized during 10 raids in six cities across five states, some 0.03% of the total wild birds seized during that period. Seizures were reported from Crawford market in Mumbai (Maharashtra); Unnao near Lucknow (Uttar Pradesh); Nalgonda near Hyderabad (Andhra Pradesh); Hathibagaan in Kolkata (West Bengal) along with Hathigisha area in the Darjeeling district of West Bengal and also in Delhi's famous Jama Masjid bird market, according to data received by TRAFFIC from various Forest & Wildlife offices and newspaper clippings (Ahmed, 2002).

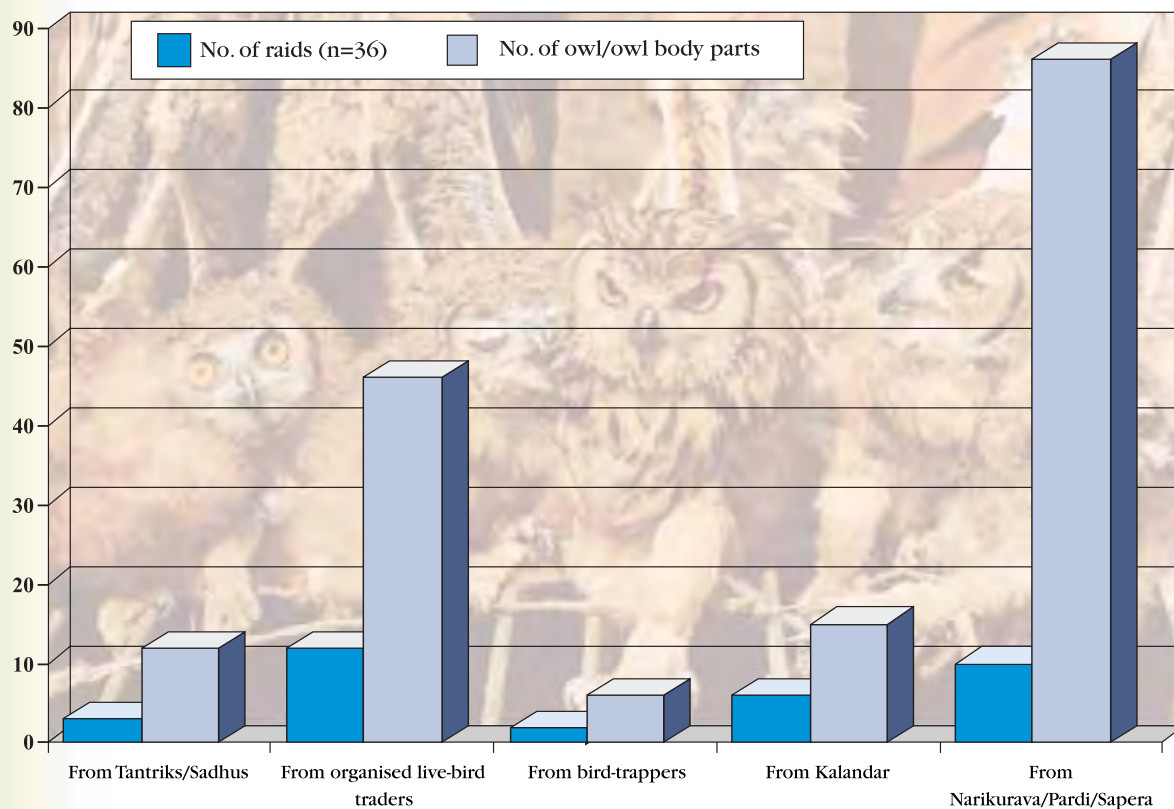
Between 2003 and 2007 the maximum numbers of seizures by state were reported from Delhi (16), followed by Uttar Pradesh (6); West Bengal (5); Haryana (2); Gujarat (2); Rajasthan (2) and one seizure each in Punjab, Uttarakhand and Tamil Nadu. The high numbers of seizures reported from Delhi and the Delhi-Uttar Pradesh border were largely due to the efforts of animal welfare organizations assisting forest and police officials. Owls were seized from a number of different sources: from *tantriks* and *sadhus*; from organized live bird traders; from trappers; one from a sapera (snake charmer); and from various ethnic groups.

One seizure of note took place during the attempted smuggling of 50 kg of stork bones from the Assam border to Bangladesh in 1998 (S. Dutta, Nature Beckon *in litt.* to TRAFFIC India, 1998). The seizure took place just before the Dussehra festival, which takes place three weeks prior to Diwali and marks the onset of a black magic period. Hence it is possible these bones would have been traded as owl bone substitutes for use in black magic.



Spotted Owlet seized from Jama Masjid bird shops, Delhi

Figure 1: Owl & owl parts confiscated from various sources



Rehabilitation of seized birds-of-prey is a major problem in India causing high mortality.

Officers from Wildlife Preservation office (Northern Region) along with seized birds including four dead larger, horned owls seized at Anand Vihar Bus stand on Delhi-Uttar Pradesh border. The birds came on an over-night bus journey from Kanauj, near Kanpur in Uttar Pradesh.



© Regional Deputy Director (Northern Region), Wildlife Preservation Office



Export of owls

Prior to the Indian bird trade ban, Inskipp (1983) documented eight species of owls exported from India between 1970 and 1982 to the UK and the USA. He recorded 590 owls exported from India and Thailand (mainly Spotted Owlets and Oriental Scops-owls at Heathrow Airport) mostly bound for the USA, UK and Switzerland with a 13% mortality rate (Inskipp, 1975).

In 1996 and 2001, a total of 11 owls of two different species were recorded by the author during two visits to Nepal where Indian bird dealers and Kalandars were using owls for street performances.

This study also found evidence that between 1996 and 2001 a small number of Indian owls were smuggled to zoos worldwide through Nepal. According to Indian bird dealers from Patna (Bihar) operating in the Baghbazar area of Kathmandu, Nepal, the birds were transported from India via the Indo-Nepal or Indo-Bangladesh borders to Pakistan. Sakhya (1995) noted bird traders in Kathmandu coming from Kolkata (West Bengal) and offering birds of prey including owls for sale. Surveys in 2005 and 2006 in Kolkata revealed a constant trafficking of birds from Kolkata to Dhaka (Bangladesh) and Nepal via Jogbani in West Bengal on the Indo-Nepal border and also from Patna via Raxual in Bihar on the Indo-Nepal border to Nepal. The majority of bird trade in Nepal is carried out by bird dealers from Patna in Bihar state (Nepal Forest Department, 2001)

The smuggling of owl parts from India to Bangladesh also came to light recently following a seizure of Barn Owl body parts by Border Security force officers in Murshidabad, West Bengal, in October 2007. This consignment was also seized just prior to Diwali.

UTILIZATION OF OWLS

Black magic

Owls and their body parts are primarily used for black magic (Ahmed, 1999 and 2004; Frost, 2004; Bruce, 1999; Marks *et al.*, 1999). There is a regular organized trade in live owls. The clientele are either from tribal areas where the majority of people are superstitious and use owls to ward off evil spirits or from towns and cities where demand is created by practicing *tantriks*. Such *tantriks* claim to be able to cure a variety of maladies and ill fortune, ranging from desire for a male child, prolonged sickness, infertility, the need for a *vashikaran* (to control someone). Even politicians and industrialists are said to be regular clients.

The *tantrik* prescribes rituals to be performed using owl parts or involving live owl sacrifices on auspicious days such as the *amavasyas* (new moon night). The *Amavasya* of Diwali is deemed the most auspicious time for owl sacrifices (Sahai, 1995). It is said that local shamans can kill an owl and take its soul, its power, and put it in a *tabiz* (an amulet). The owl power will then guide the seeker to find wealth (Marcot *et al.*, 2006). Black magic practices are either passed on from an *Ustad* (master) to a pupil or through books available at religious bookstores prescribing owl uses and related craft.

There are probably at least 50 active wild-bird selling points/localities in India where any bird trader is likely to be able to procure owls, although the birds are rarely on open display. Twenty one of these are major bird markets with an estimated annual turnover of between 20 000 and 50 000 wild birds, including a trade in owls (see Table 6).

In places such as Mehboob chowk market in Hyderabad (Andhra Pradesh), there is a regular sale of owls for black magic. According to H. Taher (*in litt* to TRAFFIC India, 1994):

“The owls are used for countering evil eyes. If a person is having a spate of evil luck, then it is obvious that a jealous friend has cast the evil eye on him. So what does a friend do? He orders an owl. When the owl is received, he instructs the shopkeeper to kill it and then skin it. The shopkeeper is so eager to get his reward that he almost skins the bird alive. The skin is burnt and the flesh is buried and the person goes home comforted by the fact that he has been liberated from the evil omen.”

Generally, Spotted Owlets are used for this purpose. During various trips to Hyderabad market, the author recorded up to 20 owlets for sale during a single visit.



Women line up at the *Sirha*'s house that uses owl for treatment. This practice is common in remote tribal areas in Chhattisgarh and Madhya Pradesh



Spotted Owlet for sale in Lucknow's Nakhas bird market

Street performances

Throughout India, the Nawab Kalandar clan is well known for training Sloth Bears *Melursus ursinus* for use in street shows. However, such “bear charmers” (*bhalu-wale*) have been moving away from their traditional vocation, partly due to their fear of persecution by wildlife authorities. Increasingly they are turning to using owls for street performances, particularly in small towns and villages where they can make more money through selling amulets purified by owls than from displaying bears.

From January to March, Kalandars start collecting chicks of large, horned owl species. The chicks are hand-raised and trained to hold amulets or “*tabiz*” in their beaks. During the display, the birds drop these amulets into the hands of bystanders, who then purchase the amulets to ward off evil. Sometimes the Kalandars tell people the *tabiz* contains ritualized portions of the owl’s body parts. In half an hour Kalandars can earn anything between INR 200 and INR 300 selling amulets costing INR 10–25 each.



A kalandar during a street show selling ‘purified’ amulets using owl



During months of January and February Rock Eagle-owl fully fledged chicks are collected, weaned and trained by Kalandar tribe for use in street performances and for selling amulets

During a single visit in January 2001, 40 mixed chicks* of large, horned owl species were recorded in a Kalandar settlement in Korai/Karavili village, near Fatehpuri, Agra, Uttar Pradesh. The most commonly used species are Rock Eagle-owl, Dusky Eagle-owl and Brown Fish-owl – these are the most preferred species as they help attract crowds due to their large size and ear-like tufts of feathers.

* Approximately 60% of these chicks were Rock Eagle-owl, 25% Dusky Eagle-owls and the remainder Brown Fish-owls.

Taxidermy

Owls are trapped, killed and stuffed to be sold as zoological specimens for schools, colleges and museums. The wholesale trade in stuffed birds was mainly noticed in two cities: Ambala in Haryana and Kolkata in West Bengal.



Stuffed bird specimens including Barn Owl in a University's Zoology Department collection

In the Chirimar mohalla of Ambala Cantonment, an interview with an experienced taxidermist in 2003 revealed that up to 50 Barn Owls and Spotted Owlets were retailed annually. In Sealdah (Kolkata), the author witnessed the sale of two stuffed specimens of Jungle Owlet and Spotted Owlet.

Zoos

In the late 1990s, traders said that a small percentage of rare owls were captured and provided to various small zoos in India. Under the Central Zoo Authority regulations (CZA), no zoo can acquire animals from the wild. Many rescued or seized owls are brought to zoos and exhibited. Owls were formerly also captured for traveling zoos.

The Central Zoo Authority is a statutory body under the Ministry of Environment and Forest, Government of India, which regulates the functioning of zoos in India, and occasionally publishes an Inventory of Animals kept in Indian zoos. According to the Inventory for 2005–2006, a total of 15 385 birds were present in 182 CZA-recognized zoos in India, including nine species of owls in 24 zoos/rescue centres across India. A total of 154 owls were logged as opening stock, with 160 owls as closing stock although 48 owls were recorded as acquisitions with only one chick hatched, 17 deaths and 21 disposal records. The 48 owls shown as acquired were probably rescued injured owls or seized from Kalandars and bird markets or those currently held in recognized Rescue Centres that came under the CZA review.

The 1999–2000 Inventory lists 55 owls of ten different owl species registered in 15 recognized zoos, a third the number registered in 2005–2006, even though there is little reported captive breeding.

Species exhibited in Indian zoos include Spotted Owlet (wrongly stated as Forest Spotted Owlet in the inventory), Rock Eagle-owl, Brown Fish-owl, Oriental Scops-owl, Mottled Wood-owl, Barn Owl, Eastern Grass-owl, Brown Wood-owl and Spot-bellied Eagle-owl.

For food

Formerly most of the Baheliya tribe members ate Spotted Owlets, but nowadays the practice is mainly carried out in villages as in the cities the Spotted Owlets are priced high (anything between INR 200–1500) and also are hard to obtain. During the days of *Shraddh*, (religious ceremonies in remembrance of dead family elders), traditional Bahelias prepare owl dishes as an offering although this practice is rapidly diminishing. The Kurmi-Bahelias in eastern Uttar Pradesh, Jharakhand and Bihar kill owls for their meat.



Owls sold for food at a village market in north-east India

The *Shikaris* of Nandikotkur in Kurnool district of Andhra Pradesh eat Short-eared Owls (Manakadan, 1988), whilst the Khonds in Kalahandi and Jeypore districts in Orissa eat Spotted Owlets (Kirkpatrick, 1954). Similarly in the Doon valley, Uttarakhand, the Baidiya community also traps and eats various species of owls including Barn Owl, Rock Eagle-owl and Spotted Owlet (Walia, 2001; and J. Walia *pers comm.*, 2007)

Choudhury (2000) mentions the consumption of Dusky Eagle-owl, Rock Eagle-owl and Brown Fish-owls by tribes in Assam. During a visit to parts of Assam, Nagaland and Manipur in July 2008, the author recorded seven owls of three species for sale as food in weekly markets. The owls were primarily collected by the Karbi tribe.

If an owl dies in captivity among live bird traders, it is dried and later the meat and body parts are sold.

Use in folk medicines

Owls are killed and their body parts used or sold for folk medicines. The feathers, bones and claws are considered an important ingredient for medicines as well as for the rituals in black magic (see Figure 1), whilst the meat is used for curing a variety of ailments (Behl, 1995).



Frost (2004) notes: *“In India, eating owl’s eyeballs was thought to help you see in the dark. Similarly in parts of India, epilepsy and other fits and seizures were supposedly cured by eating stewed owl’s eyeballs”.*

Anish P. Andheria and Kartika Jamdar *in litt.* to the Natural History discussion group (2006) comment: “Rheumatic pain is treated with a gel made from owl meat. Further, seizure in children is said to be treated with broth made from owl eyes. Owl meat is sold for curing various ailments and eaten as a natural aphrodisiac.”

Negi and Palyal (2007) note that the meat is believed to be a promoter of strength and virility among the Shoka tribes of Pithoragarh District in Uttarakhand. M. Mohapatra *in litt.* to Natural History discussion group (2007) mentions the trade and use of blood and retinas of Barn Owls in Bhubaneswar (Orissa) by foreigners living there.



Parts of owls sold for folk medicinal use / black magic



Peafowl legs and mongoose legs are also sold as rare owl claws by Pardi and Nari kurava tribe



Owl's heart are used in black magic rituals

In several parts of India it is still common to see owl parts being sold amongst tribes. Unlike the bird trade localities where owls are kept hidden, owl carcasses are openly displayed along roadsides. In tribal village fairs outside religious places and busy lanes, vendors sell animal parts including pangolin scales, fake musk pods, porcupine quills and owl parts to help cure several ailments. The Narikorva and Pardi tribes sell owl parts near temples and significant places such as the Kamakhya Devi in Guwahati, Dashashwamedh Ghat in Varanasi, Sangam in Allahabad, and on the road to Dargah Sharif in Ajmer, Rajasthan; and also in the streets of Jama Masjid in Delhi, Chowringhee and Kalighat in Kolkata and Krishnapuri *chatri* in Indore, Madhya Pradesh. Often owl parts are sold outside courts, to people anxiously awaiting court orders or judgments.

The movement of wildlife dealers is governed by religious *melas* (traditional fairs). Sales are high in *melas* where many village tourists visit and these are the principal clientele of owl vendors. Important locations for selling owl parts include: Chandrabhapa Kartik fair, *Dussehra mela* in Kota, Sitabari rural fair, *Patan mela*, Rajasthan; *Rath-mela* in Puri, Orissa; *Shivratri mela* near Aluva, Kerala, *Kumbh mela* in Allahabad, Uttar Pradesh and *Savan mela* in Haridwar, Uttarakhand.



Owl claws are in great demand for curing several ailments. Note the nails removed from the owl's claw.

During some festival seasons, such as around Dussehra, the demand is so high that look-alike birds are sold as owls. Shikras *Accipiter badius* and Eurasian Sparrowhawks *A. nisus* are beheaded and their body parts sold as owl parts by bird traders. In some fairs, the author was shown mongoose legs claimed to be owl claws!

In 2006, a case widely reported in the media stated an owl weighing 3 kg was allegedly sold for INR 3 million (about USD 68 000) (Ahmed, F., 2007; Meraaj, 2007). Four wealthy people, assisted by a *maulvi* claiming to be from Ahmedabad (Gujarat), visited well-known bird markets in northern and eastern India seeking a large owl. It is unclear how the weight of an owl is related to its magical properties, even amongst black magic practitioners, although one *maulvi* in Delhi suggested that the heavier the owl, the older and therefore wiser it was. The author encountered a case in Delhi bird market during Diwali where an owl with a (*khur*) spur on its legs was being sought.

For capture of other birds

Many owls are trapped or hand-reared for use as decoys for catching other birds. In north India, the hill bird trappers in Garhwal and Kumaon catch softbill species such as minlas, sibilas, thrushes, magpies, tits and yuhinas. Collared Owlets are most frequently used for trapping Silver-eared Mesias *Leiotrix argentauris* and Red-billed Leiothrix *Leiothrix lutea*, whilst Jungle Owlets are widely used for trapping thrushes and magpies. Each winter season, the trappers capture a Jungle or Collared Owlet whose eyelids are sewn shut and the bird trained to sit on a bamboo pole tethered by a cotton thread. To capture small birds, trappers conceal themselves then mimic the distress calls of various birds and jiggle the pole to make the captive owl flutter. Small birds begin mobbing the owl and are caught using *lhasa* (glue) on a bamboo stick (see section on Harvesting Techniques). Following the nationwide ban on bird trade, this method is slowly disappearing.

Another method observed in Dehradun (Uttarakhand) during winter months involves the use of a Jungle Owlet or occasionally a brown-dyed Asian Barred Owlet to catch White-crested Laughingthrushes *Garrulax leucolophus* and Red-billed Blue Magpies *Urocissa erythrorhyncha*. The owl is tied close to a decoy magpie surrounded by latex-coated twigs. Wild birds start mobbing the owl and are glued to the latex twigs.



Trappers in Bastar (Chhatisgarh) show owl decoys for catching local birds. Note that smaller owls such as Jungle Owlets are used for catching species such as bulbuls, ioras while medium sized owls such as Mottled Wood-owl are used for luring oriole and drongo



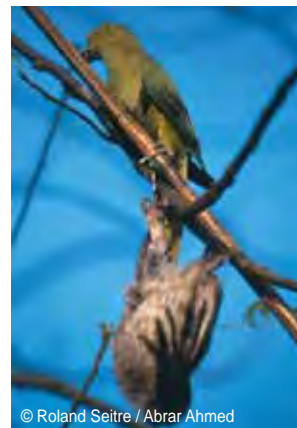
Kumaon hill bird trappers use Jungle Owlet and Collared Owlet for catching softbill birds such as Oriental White-eye and yuhinas

In the Gangetic plains of north India, owls are used to trap Rose-ringed Parakeets in February and March. A female Rose-ringed Parakeet is tied alongside a Spotted Owllet on a bamboo pole and moved close to a parakeet nest in a tree. Parakeets gather to mob the owl and are caught using a latex-covered bamboo stick.

The Munda, Maria and Muria tribals in Bastar (Chhattisgarh) use hand-reared Jungle Owlet chicks as decoys. The chick is tied to the ground surrounded by latex smeared twigs. Concealed, the trapper imitates a bird distress call to attract small birds which become glued to the twigs. Jungle Owles are used in a similar manner to catch Jungle Babblers *Turdoides striatus* in eastern Maharashtra (Velankar *in litt.* to Natural History discussion group, 2005). During one visit by the author to Bastar, three Black Drongos *Dicrurus macrocerus* and two Black-hooded Orioles *Oriolus xanthornus* were caught in one evening. Medium sized owls such as Mottled Wood-owls are similarly placed on a high branch surrounded by latex coated twigs to catch birds such as racket-tailed drongos *Dicrurus* spp, shrikes *Lanius* spp and other forest birds that are collected for food.

In Lucknow (Uttar Pradesh), a unique technique is used by Pathami bird trappers to trap House Crows *Corvus splendens* and Large-billed Crows *C. levaillantii* for use in black magic. An isolated bare tree is chosen and hundreds of twigs coated with latex are tied to it. Below it, the trapper places a Rock Eagle-owl with a House Crow tied to its leg. The trapper has another crow which he encourages to call, thereby attracting wild crows that gather to mob the owl and get stuck to the latex-coated twigs. This in turn attracts yet more crows, and a trapper may easily catch between 60 and 100 birds this way.

In Bihar, a trapper reported an ingenious way to capture eagles using a large owl. The owl is tied to the ground and latex-coated twigs double the owl's height are pegged in a circle around it. When an eagle spots the owl and swoops down to catch it, it gets glued to the latex-coated sticks.



© Roland Seitre / Abrar Ahmed

A captive female Roseringed Parakeet tied with a Spotted Owllet to attract wild parakeets to trapping range

For claws and feathers in tribal headgear



Owls' leg in the traditional headgear of a tribal from north-east India

In Arunachal Pradesh, the Nishi/Wancho tribes use several animal parts in their traditional headgear. The main components include the casques of Great Pied Hornbills *Buceros bicornis*, the skin of Asiatic Black Bears *Ursus thibetanus*, tails of Red Pandas *Ailurus fulgens*, eagles' heads, owl claws and drongo or owl tail feathers.

Owl eggs for gambling

In some forest areas of Maharashtra, people believe that owl eggs bring good luck in gambling. Owl eggs are collected from active nests (Jathar & Rahmani, 2004) and taken to a witchdoctor, who performs a ritual and applies black soot to the egg. The egg is then kept under an earthen pot for a night and next day the design on the eggshell is interpreted as a lucky number to be used during gambling that day. During Jathar's studies on Forest Owlets, twice clutches of eggs were stolen for this purpose at Toranmal Hill Station, Maharashtra (Girish A. Jathar, Researcher, Bombay Natural History Society, *pers comm.*, 2002).

Miscellaneous use

In the *Khadar* (terai) near Meerut, Rock Eagle-owls have been used to fight against Peregrine Falcons *Falco peregrinus* as a form of entertainment (Osman, 1991).



A tribal performing with owl's egg in Maharashtra

COMMUNITIES/TRIBES ASSOCIATED WITH OWLS IN INDIA

There are several tribes that are synonymous with organized bird trade India, many of them trading in owls. They include:

- 1) **Bahelias:** A Hindu tribe traditionally connected with bird trade from ancient times. Experts in catching birds, including high numbers of owls, they principally operate in the Gangetic/Terai belt in northern India, with major settlements in Kanpur, Lucknow, Meerut, Moradabad, Bareilly, Shajahanpur, Sitapur, Fatehpur, Rai Bareilly (Uttar Pradesh), Dehradun, Haldwani, Pilibhit (Uttarakhand) and Ambala (Haryana). Most use the bamboo and latex method, so are able to catch most owl species in their region.
- 2) **Mirshikar:** This is a traditional Muslim community known for its long association with the wildlife trade. This community is concentrated in eastern Uttar Pradesh, Bihar, and parts of West Bengal, with major concentrations in Patna, Begusarai, Tegra, Katihar, Deoria, Gorakhpur, Unnao, Bhagalpur, Varanasi, Burdwan and Kolkata. Members of this tribe are also settled in Hyderabad, Bangalore, Nagpur and Mumbai. They are experts in the transportation of live owls to major bird markets.
- 3) **Phasiya/Shikaris:** A Hindu bird trapping tribe that operates along the Uttar Pradesh-Madhya Pradesh borders and parts of Orissa and Andhra Pradesh. Calling themselves Shikaris (hunters), members of this tribe are engaged in bird trapping. Their base is Thoria-Sahi and Saithan-Bagachi in Cuttack (Orissa).
- 4) **Bhatiyara:** This is a Muslim community who traditionally roasts raw gram, groundnut and other nuts. However, a few members of this community took to bird trading prior to 1990. Their main base is Udham Singh Nagar in Uttarakhand and Rampur in Uttar Pradesh, and a few members of this clan operate on the periphery of Corbett Tiger Reserve.



Kurmi-Baheliya trappers with the bird capturing rods

5) Pathami or Jabjalies: This is a Muslim tribe whose primary occupation is fishing. They are mainly concentrated in Kanpur, Lucknow, Allahabad, Kannauj (Uttar Pradesh), eastern Uttar Pradesh and western Bihar. They also handle bird trade in Mumbai and were originally involved in the Rhesus Macaque *Macaca mulatta* trade but after that was banned in 1978, they shifted their focus to birds. They are excellent bird trappers and can catch most species. They travel far and wide in search of valuable birds and venture into Gujarat, Maharashtra, Karnataka and Madhya Pradesh.

6) Hakkipukki: A Hindu bird-trapping community based in South India, their major operations are in the states of Karnataka and Kerala. The Hakkipukkis are concentrated mainly in Pakshirajapuram on the Hosur-Nagarhole National Park road, about 150km south of Bangalore. These bird trappers catch owls and are said to be involved in poaching and trapping of larger animals, using the bird trade as a cover for other activities.

7) Kuruvikkara/Amblakaran/ Narikurava: These communities are associated with the bird trade in Tamil Nadu and the neighbouring states of Karnataka and Kerala. They are mainly based in Villipuram, Ambur, Tiruchirapalli, Salem and Erode in Tamil Nadu. The Kuruvikkara Reddy and Amblakaran or Mutharaiyar are clustered around Vallikollaikadu, Manganangadu, Manjalvayal, Thamikottai-Vadagadu, Keezha-vadiakadu and A. S. Puram. Narikurava women regularly sell parts of owls in major Indian cities. The Kuruvikkaran tribe is more active around Tiruchirapalli and catches all kinds of birds including owls.

8) Kalandars: This Muslim tribe specializes in the collection and training of bears for street performances. A small section of this community also rear owls for street performances. From December to February, they collect the young one of large, horned owls mainly from around Agra, Jhansi (Uttar Pradesh), parts of Madhya Pradesh and some areas (e.g. Kolar) near Bangalore.



A Kalandar with his performing animals

Apart from the Nawab Kalandars, there are Baluch Kalandars (Hindu) commonly referred to as *madaris* or *bandar wala* who sometimes use owls for street performances. The main concentration of Baluch Kalandars is in Lucknow.



A village trapper in Central India

9) **Vagri:** These are professional bird trappers and retailers based in Gujarat. Their main trade centre is the Chalta-wale-pir near Delhi Darwaza in Ahmedabad. They are a traditional hunting tribe who not only catch birds but also trap small mammals to be sold for meat.

10) **Pardis/Pashe-pardi:** This Hindu tribe is based in central India and is fully engaged in the animal trade. Bird trade is a subsidiary business for Pardis while the Pashe-pardis trap gamebirds. They live throughout Madhya Pradesh, Andhra Pradesh and Maharashtra. Owls form a small percentage of their business except for the families located in Pardi-bara in Hyderabad (Andhra Pradesh), who cater largely to bird dealers at Hyderabad's famous Mehboob chowk bird market.



A roadside vendor in Madhya Pradesh selling animal products including owl body parts

Neemuch is a small district in north-western Madhya Pradesh bordering Rajasthan, strategically located near the major railway junctions leading to Mumbai, Delhi and Hyderabad. Living here are almost 100 Pardis families who specialize in selling owl parts, porcupine quills, pangolin skins along with other *tantrik* products, beads, rings and amulets. Part of the clan is involved in hunting small mammals and birds, while the majority travel to various Indian cities selling animal products and owl parts. They have excellent information on the various tribal and urban *melas* (fairs) in India and visit them annually.

Interviews with older Pardis revealed that poaching was once a major occupation, but now it is restricted to selling such products. They said the maximum sale of owl products usually occurred around the Diwali festival. During this study, the author observed 15 Pardi owl sellers from Neemuch at the Dussehra *mela* in Kota, Rajasthan. A minimum of 20 dead owl/body parts, at least 35 owl claws, eight owl eyes and several owl bones belonging to four species were recorded. Acting on information supplied by TRAFFIC, the Kota Forest Department raided the *mela*, arrested two owl vendors, and seized five owl claws, several bone pieces and other body parts. However, a subsequent two-hour

visit to Neemuch found seven vendors with at least four dead owl/body parts, 15 owl claws, two owl eyes and other body parts. Similar operations involving owls are carried out by the Narikurava tribe in southern India and by the Bawaria tribe in Rajasthan.



A munda tribal in Madhya Pradesh with his Jungle Owlets fully-fledged chicks that are used as a trapping tool

11) Damora, Bhil and Munda: These forest-based tribes are distributed in the Bihar-Orissa-Chhattisgarh forest belt. Some take part in bird trapping and also collect owl chicks and rear them as decoy birds. On occasion, they also sell owls to visiting dealers. Some Damora families in Kiriburu, Jamda and Barbil in Jharkhand are said to deal in animals regularly.

12) Lodis and Harries: The prime occupation of these tribes is pig farming, vegetable selling and basket-making, but in some seasons they also get involved in commercial bird trade, with a small percentage catching owls, mainly in the Agra-Gwalior-Jhansi belt.

13) Bawarias: These nomadic big game-hunters are concentrated in Rajasthan, and only carry out bird trapping as a side activity, selling owl parts in villages.

14) Yanadi, Lambadas and Yerukula: These Hindu tribes are mainly distributed in Andhra Pradesh and are said to poach animals such as monitor lizards, hares and turtles, and carry out bird trapping as an additional source of food and income. They are skilled in trapping galliformes, the collection of bird nestlings and other common birds that are eaten.

15) Kalbaleyas/Jogis (Nath Saper) or Badiya: This community of snake charmers is a hunting tribe based in Rajasthan, Uttar Pradesh and parts of Gujarat. Although they are said to poach and trap gamebirds, some members of the clan occasionally trap and sell owls. Occasionally, they use live owls for street performances or to display other wildlife products.

16) Karori or Kurmi (also referred to as Gulgulwas in Jharkhand): A tribal community hailing from eastern Bihar and Jharkhand who operate up to Assam and the Indo-Bangladesh and Indo-Nepal borders. They are a bird-dependent tribe who move with the birds' breeding season and inflict considerable damage on nesting colonies of birds. They catch birds for local consumption and also for sale. Owls form a part of their diet, while owl feathers and body parts are sold as products believed to have magical powers.

17) Garo, Karbi and other north eastern tribes: Several local village tribes in the north-east such as the Karbi/Garo in Assam-Meghalaya collect birds including owls to be sold in weekly markets. In Dimapur and Kohima markets, Naga tribals often sell birds including owls for food. In the state of Arunachal Pradesh, the Nishi and Wancho tribes collect birds, particularly juveniles, and trap and hunt them using indigenous methods. They either consume the birds or use their body parts (Pijush Kumar Dutta, Coordinator, WWF-India Arunachal Pradesh State office, *pers comm.*, 2007).



TRAPPING TECHNIQUES



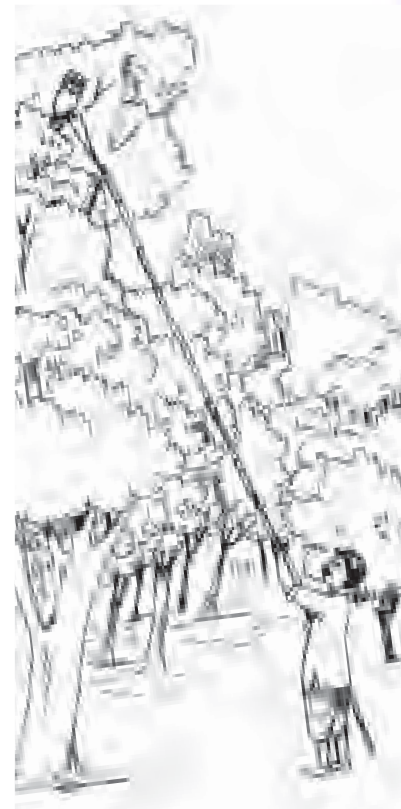
A freshly caught Spotted Owlet using the latex and bamboo method. Unlike falcons, which need latex free trapping, trapping owl with latex is quite common. This is because owls are not meant to be released later or to be kept as pets and hence no consideration is given to its for soiled plumage

Unlike diurnal birds of prey, which in India are more often accidentally caught as by-catch (Ahmed *et al.*, 1997), owls are deliberately targeted using a variety of techniques. Some capture methods have been perfected over generations and used by professional tribes engaged in bird trapping. The efficacy of these methods takes a heavy toll on local owl populations. Tribes involved part time in animal trade either kill birds to sell the body parts or collect young birds. The most widely used methods are described briefly below:

Latex and bamboo method

Most owl species roost during the day, generally perching 15–20m above the ground in leafy vegetation or on cliffs. *Lhasa*, a traditionally prepared latex glue made by boiling the sap of a *Ficus* tree with mustard oil, is smeared onto two slender twigs around 15cm length, which are then fitted to a thin bamboo pole that can be extended by adding further poles. Once an owl is located, the trapper slowly moves the glue-smeared twigs towards the bird, which becomes stuck to it upon contact.

Usually two trappers operate together. One stands below where the owl is perched, looking indirectly towards the bird or pretending to sneak past, to divert the owl's attention. Meanwhile, the other loops behind the bird to catch it using the gluey poles. Large owls nesting on trees or cliffs are frequently caught using this method. Sometimes roosting owls in tree holes are also captured this way. The *Lhasa*-coated twigs are put at the entrance of the roost hole and then the bird disturbed by beating the tree trunk or clapping to entice it out of its roost where it is ensnared.



This method requires considerable skill and is an art passed down over many generations especially in the Baheliya and Mirshikar community. Species caught by this method include Spotted Owlet, Asian Barred Owlet, Jungle Owlet, Rock Eagle-owl, Mottled Wood-owl, Barn Owl and Collared Scops-owl.

Takkva method

Instead of using *Lhasa*-coated twigs, tribes such as the Kurmi-Baheliya and Narikurava use a pointed spear – a six-inch needle, locally called a *takkva*. The trapper spears the bird with a fast upward thrust of the *takkva* and in most cases, the captured owl bleeds to death. This method is prevalent in the states of Bihar, Jharkhand, West Bengal and Assam, on the Bihar-Nepal border and in some parts of Orissa and North Andhra Pradesh. It is mainly used for large owls.

Insect, latex and dome method

This method is commonly used to catch small insectivorous owls such as Collared Owlet, Spotted Owlet and Jungle Owlet at dusk and dawn. A simple trap is prepared by bending two pieces of flexible bamboo or mulberry *Morus* spp. twigs of about 18cm



This insect method for capturing owl works reasonably well with the smaller owl species

into a D-shape. The pieces are then tied at right angles to form a four-legged dome-shaped trap that can stand on the ground. The whole trap is smeared with *Lhasa* latex and a large insect, such as a live cricket, is suspended by a thread from the centre of the dome. The trap is placed close to an owl, which upon seeing the moving insect, pounces on it and gets stuck. The method is very efficient at trapping owls.

Sometimes, instead of a dome-shaped trap, a cone-shaped trap is made by tying three latex-coated twigs and dangling the insect from the top. This method is widely practised by bird trappers throughout India.

Mice and latex method

Many species of owls are caught using mice as bait. A mouse is tied to the ground by entwining its legs or tail with thin wire or placed in a small cage. Two *Lhasa*-latex smeared twigs (30–45 cm in length) are inserted into the ground in an inverted or widened “V” shape at about 80 to 100 degrees over the mouse, and the trap placed in front of the targeted owl. The owl pounces on the mouse and becomes glued to the trap.

Some trappers substitute the mouse with a live bird whose feathers have been removed.



Use of a rodent for capture of small /medium sized owl is very effective

To trap larger owls, trappers often use a Rose-ringed Parakeet *Psittacula krameri* or an Asian Pied Starling *Sturnus contra* as bait, since both these species can be provoked to emit distress calls in the dark, thus attracting the owl. Sometimes a Jungle Owlet or Spotted Owlet is used as a lure. For trapping hill species such as the Collared Owlet during the day, a plucked live tit *Parus* spp. is used as bait.

Hanging net

Ground-dwelling owls are caught using a hanging net near grasslands or cropfields. Nets about 20–30 m long and 15 m wide are stretched on plastic chords and hung between tall trees. One side of the chord is tied while the other is held by the trappers. Owls are then flushed towards the nets. Once the owls are about to touch the net, the chord is loosened, thereby entangling the birds. Sometimes arboreal owls are caught this way during the capture of species such as Rose-ringed Parakeets and Yellow-footed Green Pigeons *Treron phoenicoptera*, which are trapped during the late evening or early morning at communal roost sites. Some larger species of owls are lured to the trapping sites by teasing an Asian Pied Starling near the net.

Falcon noose trap

This trap is popularly known as a “*Bal-chatri*” among falconers. In a small flat cage, a rodent or munia *Lonchura* spp. is kept as bait. All around the cage, the trapper places plastic nooses. When an owl lands on the cage to catch the bait, its legs become caught in a noose. This method is preferentially used to trap falcons for falconry, because it is latex free.

Snares

Although not seen in this study, the use of snares to catch owls has been reported in Darbhanga, Bihar. Inglis (1901) noted the capture of Brown Hawk-owl and Short-eared Owl using snares set for duck trapping. T. Murugavel *in litt.* (2007) mentions the snaring of two Rock Eagle-owls at the nest in Nanmangalam Reserve Forest, near Chennai, Tamil Nadu.



Snares placed on the owl's nest is a seasonal method used in South India by some tribes

Fall trap

This method is used for catching Barn Owls and doves and is widely practised along the Assam–Bangladesh and Tripura–Bangladesh borders. A female Barn Owl is kept as

decoy in the fall trap, which is a small cage with platforms on both sides. The platform has a trap-door to which a net is attached. The door is kept in such a way that it collapses under the weight of the bird once it lands on the platform. This also triggers off the net, which falls on top of the bird. The fall trap is generally raised on bamboo poles to encourage birds to land on the trap and not nearby on the ground.

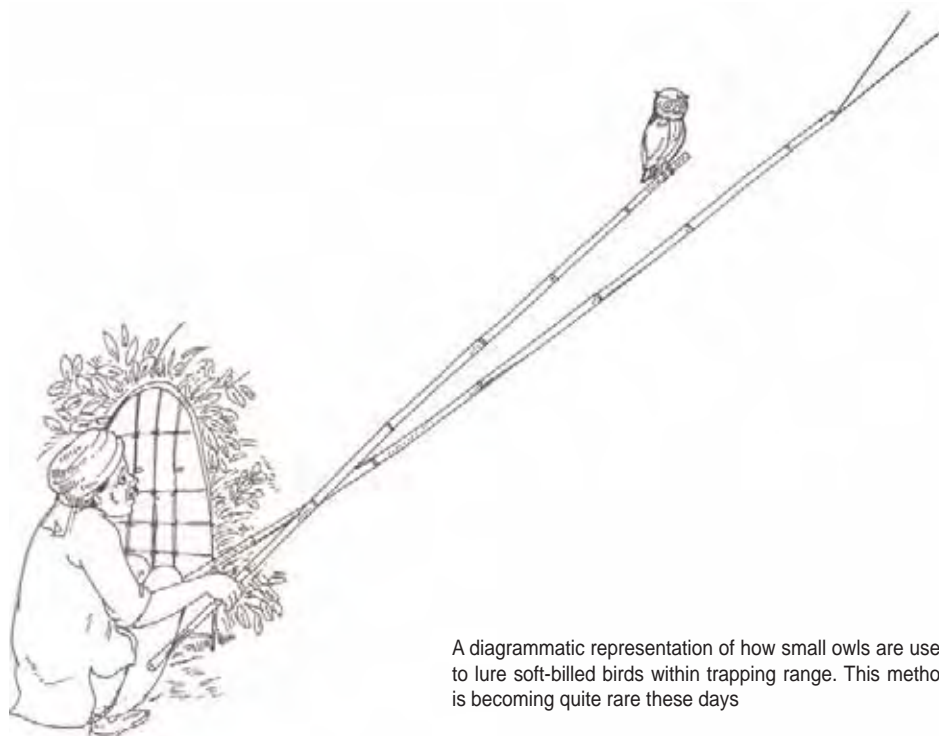


Taking fledglings from the nest

This method is most widely used by non-professional bird-trappers, who climb trees using a rope and remove the chicks from their nest or cavities with the help of hooks. These hooks are attached either to flexible stems or a flexible wire or thread, which is then inserted into the nesting cavity or tree hole. The chicks get entangled on the hook and are then pulled out. Sometimes trappers even chop down trees to catch fledglings. Often latex-coated stems are inserted into nest holes to pull out fully-feathered chicks.

Other methods

Owls caught for their feathers and claws and for local consumption are often killed using catapults or air guns. Tribes such as the Garo in Assam-Meghalaya, Nishi in Arunachal Pradesh and Murias and Maria in Bastar (Chhattisgarh) are skillful at using catapults. In Sittanavasal near Pudukkottai, Tamil Nadu, the Amblakaran tribe capture owl chicks in rock cavities by covering one side with a net then smoking the birds out from the other (R. Whitaker *pers comm.*, 2007).



A diagrammatic representation of how small owls are used to lure soft-billed birds within trapping range. This method is becoming quite rare these days

SUPERSTITIONS AND TOTEMS CONCERNING OWLS IN INDIA

The main reason for trade and trapping of owls in India is black magic and sorcery linked with superstition, totems and taboos. Shaman or black-magic practitioners frequently referred to as *tantriks* (witch doctors) in India, prescribe the use of parts from live owls and their body parts – the skull, feathers, ear tufts, claws, heart, liver, kidney, blood, eyes, fat, beak, tears, eggshell, meat and bones – alongside ceremonial *pujas* (prayers) and rituals (see Figure IV, page 68-69).

The noted Indian ornithologists Salim Ali and S. D. Ripley in the *Handbook of Birds of India and Pakistan* (1983) note:

“In most parts of India, the large owls are considered birds of ill omen, foreboding death to one of the inmates of a house on which one happens to settle at night and call. There is a great deal of folklore connected with these birds, and some fantastic beliefs and superstitions which command wide credibility.”

They go on to describe two popular recipes:

“Keep an owl without food for eight days. Thereafter beat it well with a stick when it will begin to talk fluently like a human (language unspecified!) and tell your fortune with infallible accuracy.”

“Keep an owl in a dark chamber; give it no food. Drive a nail in the center of the room and tie the bird to this by one of its legs. Sit near the bird for an hour every day and chant the prescribed mantra (words not disclosed). After 40 days put the dead bird in a sack and hang up from the ceiling of the room for a further 21 days. Thereafter separate the bones from the rest and go to the bank of a river where nobody must see you. Pick up the bones one by one and throw them in the water. The bone that swims like a snake, keep that; you will get your heart’s desires for evermore.”

During this investigation, several bookstores in northern India selling religious books were surveyed. Books written by *tantriks* prescribing the use of owls were reviewed. A book specifically on owls entitled “*Oolloo tantra*” (*Oolloo* = owl; *tantra* = charm or enchantment) by Pandit Rajesh Dikshit, describes the subject of owl totems and taboos in great detail and discusses the use of owls and their parts for various remedies.



Books mentioning uses of owl

Topics covered range from the results of owls calling on Tuesday to totems and taboos related to seeing owls during journeys. It discusses a variety of beliefs and superstitions concerning owls, such as, if an owl perches on someone's roof and sheds its feather, there will be disputes in the family and the house will soon be destroyed.

One section describes methods of using owls, including: How to know your future using a live owl; a formula for *Vashikaran* (hypnotism) using the owl's ear-tufts and feeding the targeted person with a portion of ritualized feather or owl's blood; how to become invisible using an owl's tear, tongue, heart, liver, lung, naval parts; how to destroy someone else's house and family using an owl's skull; how to destroy an enemy using an owl's head; how to decimate a prosperous family by ritualizing a live owl and burying it at the targeted house's doorstep; how to see inside the earth using an owl's tongue; and many more similar superstitions.

There is a cure assured for almost any problem or a path to fulfill one's desire using an owl or its body parts.

Described below are two sample prescriptions often suggested by *tantriks* although the list of remedies and recipes involving owls is almost endless.

Use of owls for *Vashikaran* (hypnotism)

- Both an owl's ears (ear-tufts) and castor seed *Ricinus communis* are mixed with milk and then dried, powdered and served in paan (beetle leaf). The person who is served it, or has it sprayed on their head, will be hypnotized.
- The heart of an owl is grounded or mixed with *gorochan* (a product from a cow's bile duct) in equal parts to form a paste. This paste is blessed seven times with a prescribed mantra, then used as an eyeliner and the person targeted becomes hypnotized.

Use of owls to find hidden wealth - At midnight on the auspicious day of *Amavasya* (the night of a new moon) in *Kartik* month (this day happens to be Diwali in the Hindu calendar) catch an owl. Comb the owl using a kush (a type of grass) brush while reciting a mantra 108 times and sprinkling the owl with water drops. Then, pluck three feathers from the right side of the owl and two feathers from the left side and release the bird.



A recipe mentioning use of owls to find hidden wealth on the midnight of Diwali

Keep the feathers safe until next *Shukla Paksha ekadashi* (a fortnight after *Amavasya* when the moon is waxing). Fast during the day, and at midnight go to a cremation ground and sit on a deerskin next to a pyre. Put the five owl feathers in front of you and recite the mantra 108 times. Then go to a river, take a bath along with the feathers and return home. Do the same ritual for the next four *ekadashis*. On the next *Amavasya* return to the cremation ground, perform the same ritual and bring the owl feathers home. Now keep these worshipped feathers below your pillow and sleep. That day in your dreams an old man will appear and guide you to the place and position of your hidden wealth.

Apart from trade and utilization of body parts there are several beliefs about events predicted by the number of owl hoots (Frost, 2009): One hoot=Impending death; Two hoots=Success in imminent venture; Three hoots=Woman will be married into the family; Four hoots=Disturbance; Five hoots=Imminent travel; Six hoots=Guests arriving; Seven hoots=Mental distress; Eight hoots= Sudden death; Nine hoots= Good fortune.

Diwali and the Goddess Lakshmi

Owls are also considered sacred, the *vahan* (vehicle) of Goddess Lakshmi, the main deity worshipped on Diwali to seek blessings for material riches. Therefore, they are caught as its *darshan* (sacred view) on Diwali may bring wealth to the household. Black magic practitioners sacrifice owls during *Kaalratri* hour (after midnight) at remote and lonely graveyards or on the banks of rivers to gain command or strength over supernatural powers. This form of sacrifice is a closely guarded secret, and no outsider is allowed to witness it; secrecy is prescribed as a pre-requisite for success in such rituals.

The goddess of wealth and beauty is pre-eminently the consort of Vishnu. She is one of the 14 “gems” to have sprung up, when the gods churned the ocean of milk to procure the nectar of immortality. As a goddess of prosperity, wealth and riches she is especially worshipped on the last day of the dark night in the month of *Kartik* (October–November) or in the month of *Ashwin* (September–October), at the end of the darkening fortnight.



Books mentioning use of owl and its body parts are common in some parts of India. Such books are available near religious bookstores and certain bus-stands

CONCLUSION

Although illegal, the trade and utilization of owls is widespread and thus poses a potential conservation threat if carried out at unsustainable levels. Domestic trade in owls is highly lucrative, and owls remain a key target for several tribes connected with the bird trade, several of whom make a living from the owl trade. Amongst tribal communities, there appears to be little appreciation of current wildlife laws.

During the course of researching this report, owls were encountered in trade at a number of locations around India. Despite the fact that owls are generally not openly displayed or advertised, it was apparent that their trade was reasonably widespread. However, the sheer size of India (more than 3 million km²) and the existence of many bird markets is a logistical challenge for any investigator and for law enforcement.



Legs of larger, horned owl are tied to prevent commotion during travel

RECOMMENDATIONS

Stricter monitoring and control on the bird trade

There have been raids from time to time in some well-known bird markets, especially in metropolitan cities. During the study it was noted that there is hardly any checking at many sensitive areas, for instance, the Mirshikar-toli (the stronghold of the bird trapping community) in Patna (Bihar). This allows the trade to continue and flourish. Monitoring and control of the bird trade does not appear to be a current priority for enforcement officers. Most of the established trade areas and markets are well-known locally, yet they are rarely, if ever, monitored for illegal trade. As such, despite a few token raids, business continues as usual. The use of legitimate trade in exotic birds as a cover for illegal trade must also be targeted.

Training for enforcement officials

Field level enforcement officials generally lack skills to identify species and investigate the bird trade. They also have a limited knowledge of how the trade operates, all of which hampers enforcement. There is a need to undertake capacity building of enforcement staff and among government agencies such as the forest department, railways, Customs and the police.

Rescue/Rehabilitation centres for seized owls

India has very few bird hospitals and support, care and rehabilitation is usually not available for birds of prey, particularly owls. At many shelters, owls are reported to be released back in the wild after a short duration. It is not appropriate to release a hand-reared owl in the wild. As owls are territorial, in some seasons it is more difficult for a released individual to cope with the mobbing by rival owls and other birds in the vicinity. Proper release protocols, such as those laid down in IUCN guidelines, should be strictly adhered to.



Discourage taxidermy in private museums/colleges/schools

It is illegal for institutions such as schools, colleges and museums to have a collection of stuffed birds of scheduled species without a valid ownership certificate, but little information exists about such collections and they need to be closely monitored.

Public awareness campaign

People need to be made aware about the illegality of using owls and their body parts, and there is a need to educate clients about the myths regarding the use of owls. Awareness campaigns should be conducted at traditional, religious fairs where owl products are available. Trapping sites such as cemeteries, scared groves, buffer areas of national parks and sanctuaries and reserved forests should have boards displayed, highlighting the illegality of owl trapping and use.

Rehabilitation of traditional bird trapping communities into alternative sustainable livelihoods

Communities engaged full time in bird trade over generations need to be rehabilitated and supported in various alternative livelihood options.

Box 1: Care and feeding of Owls

Small sized owl chicks are raised on diet of termites and crickets. Medium sized owls are fed with lizards, rodents and small birds such as munia. Traders feed adult larger, horned owl with House Crow and Roseringed Parakeets.





Nawab Kalandar

Figure 2: Parts of owls used in various occult practices

(Based on discussions with occult practitioners and investigations)

Owl's head: to destroy enemy; to find hidden wealth; to read in dark; to end fever

Beak: to prevent children from black magic and bad luck; for owl and crow related recipes

Eyes: to know about earlier life; to know about future; to end fever; to win over boss; to know about sex life

Nostrils: to attain overall success

Tongue: to become invisible; to see inside the earth; to induce a divorce

Heart: to become invisible; to overcome death

Kidney: to know about future

Liver: to become invisible

Lung: to become invisible

Owl parts: to attract others; to win in a gamble; to calm your bad stars

Owl navel parts: to become invisible

Owl's bone: to overcome wind speed during travel; how to control birds; to destroy an enemy

Skull bone: for destroying an enemy and his family; to find hidden wealth

Rib bone: to prevent children from black magic and bad luck; to prevent teeth grinding in children

Owl's head bone: to win in an election

Bone from owl's womb (?): Stop your enemies from creating obstacles; to win in a war

Nail: to prevent children from black magic and bad luck; to get energy for walking 100 miles; to overcome from the fear of ghosts and evil spirits; for attaining overall success

Right leg: to end fever

Left leg: to get an enemy to vacate his house

Owl's leg vein: to destroy an enemy





Live owl: for decimating a prosperous family; farming related owl mantra; to mitigate family disputes; to find a lost person

Owl's flesh: to control someone

Owl's fat: to have a successful sea journey

Owl's blood: to destroy an enemy; for *Vashikaran* (hypnotizing)

Owl egg shell: to improve luck; to control speed of someone's vehicle; to pass exams

Owl's feces: to improve luck; to control speed of someone's vehicle; for owl and crow related recipes

Owl tears: to become invisible

Owl feathers: for *Vashikaran* ; to prevent children from black magic and bad luck; for owl and crow related recipes; to improve luck

Ear tufts: for *Vashikaran*

Head feathers: to hypnotize a lover

Owl's head down feathers: to win a court case

Owl neck feathers: to escape bad luck; to ensure riches

Owl shoulder feather: to win over an enemy

Right wing feathers: to remove a ghost; to find wealth; to get a person transferred

Left wing feathers: to find wealth; to ward off evil spirits

Owl's thigh feathers: to hypnotize

Tail feathers: to neutralize evil eye; to end fever; to win in a job; to break friendship; to get a job

Breast feathers of the owl's young one: to conceive and prevent unwanted abortions

Feathers from owl's nest: to hypnotize



ANNEXURE I

Markets visited by the author during this study (1992–2008) where owls were recorded

Date	Name of market/ locality	State	Owl species and numbers recorded
23 October 1992	Nakhas bazaar / Daliganj, Lucknow	Uttar Pradesh	Spotted Owlet (16); Rock Eagle-owl (2); Brown Fish- owl (1); Collared Scops-owl (1); Barn Owl (5)
25 October 1992	Bagahi / Ashok Nagar, Kanpur	Uttar Pradesh	Dusky Eagle-owl (1); Collared Scops-owl (2); Brown Fish-owl (1); Rock Eagle-owl (2)
26 October 1992	Nakhas Kona, Dr. Katju Road, Allahabad	Uttar Pradesh	Spotted Owlet (12); Rock Eagle-owl (1); Brown Fish- owl (1); Collared Scops-owl (1)
November 1992	Jama Masjid / Seelampur/ Shastri Park, Delhi (2 surveys)	Delhi	Spotted Owlet (50–60); Large horned owl sp. (3)
25 December 1992	Pakaryiya Mohalla, Pilibhit	Uttar Pradesh	Collared Owlet (1); Jungle Owlet (2)
27 December 1992	Chalti/ Sukhidang, District Pitthoragarh	Uttarakhand	Asian Barred Owlet (1); Jungle Owlet (1); Collared Owlet (2)
24 January 1993	Ghata-beg garhiya, Sahadat ganj, Lucknow	Uttar Pradesh	Large horned owl sp. (2); Barn Owl (4)
20 February 1993	Talif Sarai, Unnao	Uttar Pradesh	Spotted Owlet (10); Barn Owl (4)
20 February 1993	Lathiya mohalla/ Bagahi, Kanpur	Uttar Pradesh	Rock Eagle-owl (1); Brown Fish-owl (2); Barn Owl (4)
25 August 1993	Thapar Nagar, Guirdwara road, Meerut	Uttar Pradesh	Spotted Owlet (6); Collared Scops-owl (2); Asian Barred Owlet (2); unidentified (1)
19 September 1993	Bhadarabad, 14 kms before Haridwar	Uttarakhand	Rock Eagle-owl (3); Collared Scops-owl (1)
20 September 1993	Khurbura, Kavli Road, Dehradun.	Uttarakhand	Asian Barred Owlet (1); Spotted Owlet (1); Collared Owlet (1); Barn Owl (1)
27 September 1993 to 1 October 1993	Jalupura / Loharra ka Khurra, Ghat Gate / various markets, Jaipur	Rajasthan	Spotted Owlet (20); Rock Eagle-owl (1) Large horned owl sp. (5)
October, 1993	Jama Masjid / Seelampur, Delhi (3 surveys)	Delhi	Spotted Owlet (30–40); Brown Fish-owl (2); Barn Owl (8)
28 October 1993	Lalkurti, bara bazaar, Meerut	Uttar Pradesh	Spotted Owlet (20); Collared Scops-owl (1); Barn Owl (2)
16 November 1993	Indira Nagar, Haldwani	Uttarakhand	Jungle Owlet (4)
21 November 1993	Hatibagan/ Matiabruz/ Sealdah Railway Station, Kolkata	West Bengal	Rock Eagle-owl (2); unid'ed mix of Spotted Owlets & Collared Scops-owl (15-20); unidentified stuffed owls (2)
2 January 1994	Baheliya tola, near Golchata, Varanasi	Uttar Pradesh	Spotted Owlets (25-30); Collared Scops-owl (1); unidentified (7)

24 February 1994	Chorguliya / Jeylikhot, District Nainital	Uttarakhand	Jungle Owlet (2); Collared Owlet (1); Asian Barred Owlet (2)
19 May 1994	Kicchri mohalla, Haldwani, Haldwani	Uttarakhand	Jungle Owlet (5), Brown Fish-owl (2)
22 May 1994	Jama Masjid (Opp Red Fort); Delhi	Delhi	Large horned owl sp. (4); Collared Scops-owl (2)
18 June 1994	Mohalla Babujai, Shahjahanpur	Uttar Pradesh	Spotted Owlet (1); Rock Eagle-owl (2)
13 September 1994	Jama Masjid, Delhi	Delhi	Spotted Owlet (17), Brown Fish-owl (2); Collared Scops-owl (1); Dusky Eagle-owl (2)
24 July 1994	Chirimar mohalla, Kaccha bazaar / Football chowk Ambala	Haryana	Rock Eagle-owl (1); Brown Fish-owl (1); Barn Owl (1); unidentified (2)
November 1994	Gurdwara Road, Thapar Nagar/ Lalkurti, Meerut (2 surveys)	Uttar Pradesh	Spotted Owlet (30-35), large horned owl sp. (from Moradabad and Uttar Pradesh) (3)
November 1994	Jama Masjid / Seelampur, Delhi (2 surveys)	Delhi	Spotted Owlet (25-30); Barn Owl (5); Brown Fish-owl (2); Collared Scops-owl (3)
5 May 1995	Kishanpura, Jallandar	Punjab	Rock Eagle-owl (2); Spotted Owlet (5); Barn Owl (1); unidentified (2)
3 May 1995	Gandhi Nagar, Jammu	Jammu & Kashmir	Spotted Owlet (8); Barn Owl (4); Rock Eagle-owl (2) unidentified (1)
21 May 1995	Mirshikar toli, Patna	Bihar	Spotted Owlet (3); Brown Fish-owl (2)
23 May 1995	Makdom Sarai, Siwan	Bihar	Barn Owl (10-15); Dusky Eagle-owl (3); Large horned owl sp. (2)
25 May 1995	Kanta toli, Ranchi	Jharkhand	Barn Owl (2)
November 1995	Gurdwara Road / Lal kurti, Thapar Nagar, Meerut (Larger, horned owls came from Moradabad)(4 surveys)	Uttar Pradesh	Spotted Owlet (20); Rock Eagle-owl (1); Brown Fish-owl (2); Collared Scops-owl (2)
23 December 1995	Pakariya mohalla, Pilibhit	Uttar Pradesh	Collared Owlet (1); Barn Owl (3); Jungle Owlet (2)
24 December 1995	Sukhi Dhang, Pithoragarh	Uttarakhand	Asian Barred Owlet (3); Collared Owlet (2)
15 February 1996	Crawford market and with street performer, Mumbai	Maharashtra	Barn Owl (2); Rock Eagle-owl (2)
28 December 1996	Khurbura, Kavli Road, Dehradun	Uttarakhand	Asian Barred Owlet (3); Collared Owlet (1); Jungle Owlet (3); Spotted Owlet (8)
18 June 1998	Mohminpura near Idgah, Nagpur	Maharashtra	Dusky Eagle-owl (2); Rock Eagle-owl (1); Jungle Owlet (2); Mottled Wood-owl (2)
1 November 1998	Phasiyana mohalla, Jhansi	Uttar Pradesh	Large horned owl sp. (3); Rock Eagle-owl (1)
15 June 1998	Bairagarh, Bhopal	Madhya Pradesh	Rock Eagle-owl (1); Barn Owl (1)
22 June 1998	Bastar, Jagdalpur	Chhattisgarh	Jungle Owlet (6); unidentified (4)
26 September 1999	Shikari-basti, near Ramganj / Welcome Guest house, Jaipur	Rajasthan	Barn Owl (1); Collared Scops-owl (2); unidentified (1)

27 September 1999	Pan bazaar . Madar Gate, Ajmer	Rajasthan	Rock Eagle-owl (2); Collared Scops-owl (1)
28 September 1999	with Kalandar, near Railway station, Jodhpur	Rajasthan	Dusky Eagle-owl (1); unidentified stuffed owl (1)
28 November 1999	Loharra ka Khurra, Ghat Gate, Jaipur	Rajasthan	Spotted Owlet (4); Barn Owl (2); unidentified (2)
30 November 1999	Sri-pura / Dushera mela, Kota	Rajasthan	Full body parts of various owls (minimum 4 owls)
1 October 1999	Vagri Basti, near Dilli Darwaza, Ahmedabad	Gujarat	Spotted Owlet (7); Rock Eagle-owl (3); Collared Scops-owl (2); unidentified stuffed owl (1)
2 October 1999	Chabha bazaar	Gujarat	Rock Eagle-owl (1); Barn Owl (2)
3 October 1999	Sukarwari bazaar at Fatehpuri, Baroda	Gujarat	Barn Owl (3); unidentified (1)
6 October 1999	Near Bal Bhawan, Rajkot	Gujarat	Brown Fish-owl (1); Barn Owl (1)
10 October 1999	Mehboob Chowk, Hyderabad	Andhra Pradesh	Rock Eagle-owl (2); Collared Scops-owl (5); Spotted Owlet (12); Barn Owl (2); Jungle Owlet (3)
6 October 1999	Freeganj, Ujjain	Madhya Pradesh	Rock Eagle-owl (2); unidentified stuffed owl (1)
7 October 1999	Shivaji Market and with street performer near Railway Station, Indore	Madhya Pradesh	Rock Eagle-owl (2); Brown Fish-owl (1); Barn Owl (5)
8 October 1999	Jehangirabad murgi bazaar / Bairagarh, Bhopal	Madhya Pradesh	Rock Eagle-owl (2); Dusky Eagle-owl (1); unidentified (4)
October 1999	Jama Masjid / Seelampur, Delhi (4 surveys)	Delhi	Spotted Owlet (20-25); Rock Eagle-owl (5); Barn Owl (8); Collared Scops-owl (3) Jungle Owlet (1)
2 November 1999	Near Railway station, Gwalior	Madhya Pradesh	Rock Eagle-owl (2, dead); Barn Owl (2)
22 November 1999	Kanta toli, Ranchi	Jharkhand	Rock Eagle-owl (1); Jungle Owlet (2)
25 November 1999	Mirshikar toli, Patna	Bihar	Rock Eagle-owl (1); Spotted Owlet (40-50); Brown Fish-owl (1); Barn Owl (3) Oriental Scops-owl (1).
26 November 1999	Sakshi market, Tata (Jamshedpur)	Jharkhand	Spotted Owlet (1); Barn Owl (3)
30 November 1999	Narkul Danga / Sealdah Railway Station, Kolkata	West Bengal	Rock Eagle-owl (2); large horned owl sp. (3); unidentified stuffed owl (2)
1 December 1999	Nakhas kona, Dr. Katju Road, Allahabad	Uttar Pradesh	Rock Eagle-owl (1); Spotted Owlet (6); Collared Scops-owl (3); Jungle Owlet (2); unidentified (5)
24 May 1999	Russell market, Bangalore	Karnataka	Rock Eagle-owl (1); Barn Owl (4); Collared Scops-owl (3)
8 June 1999	Elamakkar market, Cochin	Kerala	Barn Owl (1)
18 June 1999	New Moore market, near Nehru Stadium, Chennai	Tamil Nadu	Rock Eagle-owl (1)

12 January 2001	Korai village, near Fatehpuri, Agra	Uttar Pradesh	Large horned owl sp. (40: about 60% were Rock Eagle-owl; about 25% were Dusky Eagle-owl and rest Brown Fish-owl)
30 March 2001	Nakhas bazaar, Lucknow	Uttar Pradesh	Oriental Scops-owl (1); Collared Scops-owl (9), Spotted Owlet (10); Brown Wood-owl (1); Rock Eagle-owl (1)
April 2002	Bastar villages, Jagdalpur	Chhattisgarh	Brown Fish-owl (1); Jungle Owlet (8); Mottled Wood-owl (9)
14 July 2002	Mehboob Chowk, Hyderabad	Andhra Pradesh	Spotted Owlet (25-30); Rock Eagle-owl (5), Dusky Eagle-owl (3); Jungle Owlet (2)
7 June 2003	Narkul Danga/ Matiabruz / Sealdah Railway station, Kolkata	West Bengal	Spotted Owlet (25-30); Barn Owl (6), Dusky Eagle-owl (3); unidentified stuffed owl (2)
12 Feb 2004	Nakhas bazaar / Daliganj / Kadra, Lucknow	Uttar Pradesh	Eastern Grass-owl (1 possible); Collared Scops-owl (2); Jungle Owlet (1)
27 April 2004	Mohminpura near Idgah, Nagpur	Maharashtra	Rock Eagle-owl (2); Jungle Owlet (1); Mottled Wood-owl (1); Barn Owl (1)
19 October 2005	Indira-nagar, Haldwani	Uttarakhand	Brown Wood-owl (2);
October 2005	Jama Masjid / Seelampur, Delhi (2 surveys)	Delhi	Spotted Owlet (25-30); Brown Fish-owl (1)
23 June 2006	Nakhas bazaar, Lucknow	Uttar Pradesh	Oriental Scops-owl (1); Rock Eagle-owl (2)
November 2006	Jama Masjid, Delhi(3 surveys)	Delhi	Spotted Owlet (20-25); Brown Fish-owl (1); Collared Scops-owl (3)
10 February 2007	Villages in Bastar	Chhattisgarh	Jungle Owlet (5); Brown Fish-owl (2)
October 2007	Jama Masjid / Seelampur/ Moolchand / Minto Road, Delhi (3 surveys)	Delhi	Spotted Owlet (40-50); Rock Eagle-owl (6); Large horned owl sp. (5)
20 October 2007	Dushera mela, Kota	Rajasthan	Full body parts of a minimum 4 owls of two species
25 June 2008	New market, Dimapur	Nagaland	Brown Wood-owl (1); unidentified (2)
28 June 2008	Jafrajaan, Karbi Anglong	Assam	Jungle Owlet (4); unidentified (2)
29 June 2008	Diphu, Karbi Anglong	Assam	Jungle Owlet (3)
9 July 2008	Fullertal, Silchar, North Cachar	Assam	Brown Fish-owl (1)
24 July 2008	Mirshikar toli, Patna	Bihar	Unidentified large horned owl sp. (1); Rock Eagle-owl (1)
October 2008	Jama Masjid / Seelampur, Delhi (2 surveys)	Delhi	Spotted Owlet (20-25); Rock Eagle-owl (3); Collared Scops-owl (4)

REFERENCES

- Ali, S. (1996). *The book of Indian birds*. Oxford University Press, Mumbai.
- Ali, S. and Ripley, S. D. (1983). *Handbook of birds of India and Pakistan*. Compact Edition, Oxford University Press, New Delhi.
- Ahmed, A. (1997). *Live Bird Trade in Northern India*. WWF/ TRAFFIC-India, New Delhi.
- Ahmed, A., Rahmani, A. R., Das. G. and Misra, M. K. (1997). India's Illegal Falconry trade. *TRAFFIC Bulletin* Vol. 17 No.1: 49-52.
- Ahmed, A. (1999). Fraudulence in Indian Live bird trade in India: An Identification Monograph for Enforcement staff: An Identification Monograph. TRAFFIC India/ WWF India/Ministry of Environment and Forest, New Delhi.
- Ahmed, A. (2002). *Live Bird Trade in India*. Unpublished report. TRAFFIC-India/ WWF-India, New Delhi.
- Ahmed, A. (2004). Illegal Bird Trade (Pp 66 -70) in: Islam, M. Z. and Rahmani, A. R. Important Bird Areas in India: Priority sites for conservation. Indian Bird Conservation Network: Bombay Natural History Society and BirdLife International (UK).
- Ahmed, F. (2007). *Kashmiris chase owls - and millionaire dreams*. India eNews <http://www.indiaenews.com/india/20070110/35225.htm>. Accessed 10/01/2007.
- Anonymous (1993). *The Wildlife (Protection) Act, 1972* (as amended upto 1993). Natraj Publishers, Dehra Dun.
- Anonymous (1996). *Checklist of CITES Species (1996)* CITES Secretariat World Conservation Monitoring Centre, Cambridge, UK.
- Anonymous (1998a). *CITES Government of India Ministry of Environment & Forests Annual Report*. Convention on International trade in endangered species of wild fauna and flora New Delhi.
- Anonymous (1998b). *Vernacular Names of the birds of the Indian Subcontinent Buceros*. Envis newsletter: Avian ecology and inland wetlands Vol., 3-4-1998 No. 1 Bombay Natural History Society, Mumbai.
- Andheria, A. P. and Jamdar, K. (2006). Myths and the Owl. Note circulated in *Natural History of South Asia – General discussion and research*: Compiled from www.owlpages.com. Accessed 6/1/06.
- Birding.in website. <http://www.birding.in/orders/strigiformes.htm>. Viewed on 5/2/2007.
- BirdLife International (2001). *Threatened birds of Asia: BirdLife International Red Data Book*, Cambridge, UK. BirdLife International.
- BirdLife International (2009). Various species factsheet. Downloaded from <http://www.birdlife.org>. Accessed on 19/9/2009.
- Behl, T. (1995). *Chamtkari tantr sandhana*. Randhir Prakashan, Haridwar. 160- 176.
- Behl, T. (1997). *Tantr sandhana kase kare*. Randhir Prakashan, Haridwar. 132 – 136.
- Bruce, M. D. (1999). Family Tytonidae (Barn-owls) pp. 34-75 in: del Hoyo, J., Elliot, A. & Sargatal, J., eds. (1999) *Handbook of the birds of the World. Vol. 5. Barn-owls to Humming birds*. Lynx Edicions, Barcelona.
- Central Zoo Authority (2000). *Inventory of Animals in Indian Zoos (1999-2000)*, Delhi.
- Central Zoo Authority (2006). *Inventory of Animals in Indian Zoos (2005-2006)*, Delhi.
- Chaudhuri, S. (2007). Owls adds new twist to smuggling. *Asian Age*, Delhi Edition: 8/10/2007.
- Choudhury, A. (2000). *The birds of Assam*. Gibbon publication and WWF-India, North-East Regional Office, Guwahati.
- Choudhury, A. (2001). Some bird records from Nagaland, north-east India. *Forktail* 17: 91-103.
- Dikshit, R. (year not given). *Ooluo tantr*. Creative Publication. Delhi.

- Dey, J. (1998). 4,223 Caged birds fly to freedom. *Express Newsmen*; 17 August Mumbai.
- Frost, P. (2004). The Medicinal Uses of Owls. Members Newsletter. <http://www.raptorfoundation.org.uk/200408nl.html>. Viewed 28/12/2006.
- Frost, P. (2009). http://www.pauldfrost.co.uk/intro_o2.html (Owls Mythology & Folklore). Accessed September 2009.
- Gandhi, M. (2007). Night's Vigilantes Imperiled. Pioneer, Delhi edition, 25/4/2007.
- Grimmett, R., Inskipp, C. and Inskipp, T. (1998). *Birds of the Indian Subcontinent*. Oxford University Press: New Delhi.
- Gupta, B. K. and Rathinasabapathy, B. (1998). Wild Bird Trade in Coimbatore, South India. Zoo Print Vol. XIII, No. 1: 1-4.
- Inskipp, T. P. (1975). *All Heaven in a Rage. A Study of Importation of Wild Birds into the United Kingdom*. Royal Society for Protection of Bird. 41 pp.
- Inskipp, T. & Thomas, G. J. (1976). *Airborne Birds. A Further Study of Importation of Wild Birds into the United Kingdom*. Royal Society for Protection of Bird: 25 pp.
- Inskipp, T. (1983). The Indian Bird Trade. *TRAFFIC Bulletin Vol. V No. 3/4*: 26 - 46.
- Inglis, C.M. (1901). Snaring owls in Nooses. *Jour. Bombay Nat. Hist. Soc.* 13(4) 700.
- Jathar, G. A. and Rahmani, A. R. (2004). Ecological studies on the Forest Spotted Owlet *Athene (Heteroglaux) blewitti*: Bombay Natural History Society, Mumbai. 58.
- Kirkpatrick, K. M. (1954). Aboriginal methods employed in killing and capturing game. *Jour. Bombay Nat. Hist. Soc.* 52 (2 & 3) 285-300.
- Marcot, B. G., Johnson, D.H. & Cocker, M. (2006). Owl in Lore and Culture. The Owl pages. www.owlpages8.com. Viewed on 28/12 /2006.
- Marks, J. S., Cannings, R. J. and Mikkola, H. (1999). Family Strigidae (Typical owls) pp. 76-85 in: del Hoyo, J., Elliot, A. & Sargatal, J. eds (1999). *Handbook of the birds of the World*. Vol. 5. Barn-owls to Humming birds. Lynx Edicions, Barcelona.
- Manakadan, R. (1988). *Shikaris of Nandikotkur*. Hornbill (2); 18-21.
- Meraj, S. (2007). Kashmir hunts for owl or Laden! IBNlive.com. <http://ibnlive.in.com/news/kashmir-hunts-for-owl-or-laden/32179-3.html> Viewed 10/01/2007
- Negi, C. S. and Palyal, V. S. (2007). Traditional Uses of Animal and Animal Products in Medicine and Rituals by the Shoka Tribes of District Pithoragarh, Uttaranchal, India. *J. Ethno-Med.*, 1(1): 47-54.
- Pande, S., Tambe, S., Francis, C. M. and Sant, N. (2003). Birds of Western Ghats, Konkan & Malabar (including birds of Goa). BNHS, Mumbai and Oxford University Press, New Delhi. 345 & 352.
- Osman, S. M. (1991). *Hunters of the Air- a Falconer's Notes*. WWF-India, New Delhi.
- Rasmussen and Anderton (2005). *Birds of South Asia*. The Ripley Guide. Vol 1 & 2. Smithsonian Institution and Lynx Edicions, Washington, D.C. and Barcelona. pp. 160-169.
- Ratnakar, P. (1996). *Hinduism*. Lustre Press Pvt. Ltd. New Delhi. 96 pp.
- Shakya, S. (1995). *Bird Massacre in Nepal*. Bird Conservation Nepal. Vol. 4 no 3.
- Sahai, S. N. (1995). The night of the owls. Sahara Time. *Weekly Newspaper*. 29/10/1995.
- Shreshta, T. K. (2000). *Birds of Nepal*. R. K. Printers, Kathmandu. 198-205.
- Times of India (2001). Someone, save this owl; 6 August: New Delhi.
- Velankar, R. (2005). Bird hunting in eastern Maharashtra, India. Note circulated in *Natural History of South Asia – General discussion and research*: 2/1/05.
- Walia, J. S. (2001). *Badiya – Hunter-gatherers of Doon Valley*. TRAFFIC India/WWF India. Delhi: 102.

GLOSSARY

Gutika: a magic pill supposed to confer some supernatural power (such as making oneself invisible.)

Shaman: a priest who uses magic for the purpose of curing the sick, driving the hidden and controlling evil; ancestral spirits responsive only to the shamans.

Shraddh: a ceremony in the honour and benefit of deceased relatives observed at fixed periods and on occasion of rejoicing as well as of mourning. Offerings are made to the spirits of the deceased and food and gifts are given to the Brahmins, officiants and relatives.

Shikari: having to do with hunting, a hindi word for hunter.

Siddhi: acquisition of supernatural skill or capability.

Shrotajan: audience, listener.

Tantra: a work teaching magical and mystical formulae for worship or attainment of super human power or a branch of the veds, charm, enchantment, a religious treatise teaching peculiar and mystical formulae or rites, for the worship of the dietes, or for the attainment of superhuman power.

Tantrik: a practitioner of tantra.

Tantra sadhna: tantra practices for all the attainment of a desired goal or super-human faculties.

Tabiz or Taviz or Tabeez: an amulet, a charm, a locket – often inscribed with a magic incantation or symbol to protect the wearer against evil (as disease or witchcraft) or to aid him.

TRAFFIC is the world's largest wildlife trade monitoring network and a joint programme of WWF, the conservation organization and IUCN, the International Union for Conservation of Nature. It was established in 1976 and since then it has developed a considerable international reputation for helping to identify and address conservation challenges linked to trade in wild animals and plants. TRAFFIC India carries out research and provides analysis, support and encouragement to efforts aimed to ensure that wildlife trade is not a threat to the conservation of nature in India.

WWF-India is one of India's leading conservation organizations with programmes and projects spread across the country. The organisation works for the conservation of biodiversity, natural habitats and the reduction of humanity's ecological footprint. WWF India acts to *stop the degradation of the earth's natural environment and to build a future in which humans live in harmony with nature.*

For further information visit: www.wwfindia.org

WWF and TRAFFIC are committed to work together with government agencies, NGOs, and all like minded individuals to curb illegal wildlife trade that has become a growing threat to our natural treasures. As a specialist organisation monitoring wildlife trade issues, TRAFFIC India has an important contribution to make in India.

For more information contact:

TRAFFIC India
c/o WWF- India Secretariat,
172-B, Lodi Estate.
New Delhi-110 003
INDIA

Tel: (91) 11 41504786

Fax: (91) 11 43516200

Email: trafficindia@wwfindia.net

Website: www.trafficindia.org or www.traffic.org



