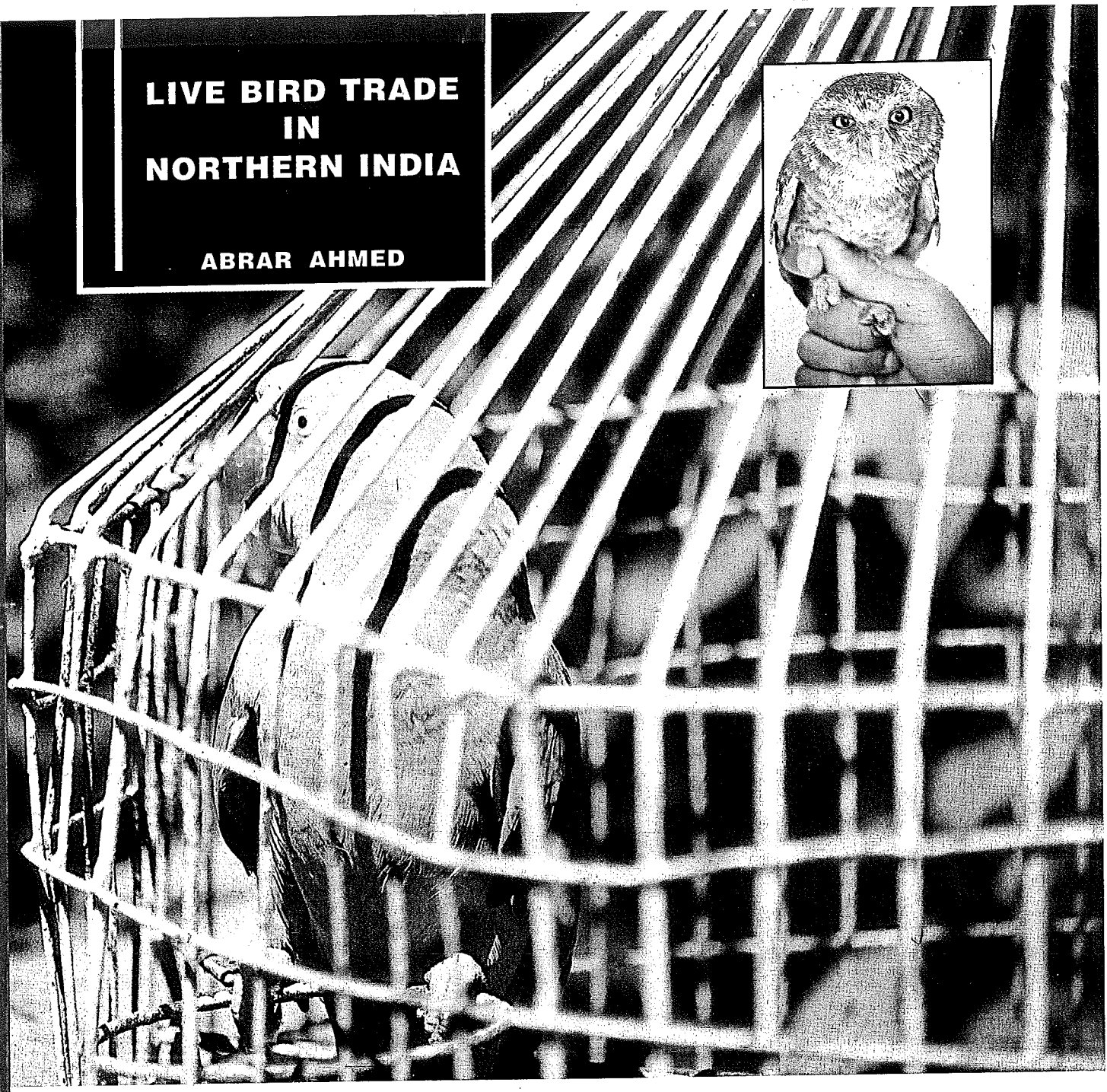
LIVE BIRD TRADE IN NORTHERN INDIA

ABRAR AHMED



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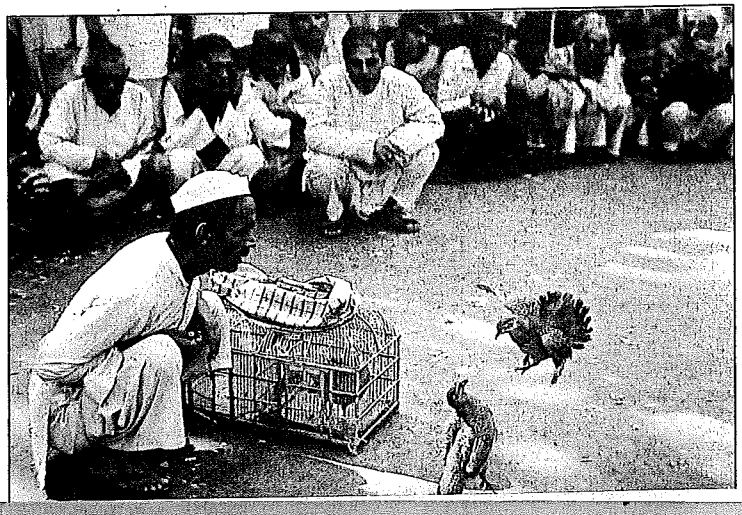

A TRAFFIC India Trade Study

Live Bird Trade in Northern India

Abrar Ahmed

Project Advisor
Dr. Asad R. Rahmani

WWF

World Wide Fund for Nature - India

About WWF-India

The World Wide Fund for Nature-India (**WWF-India**), formerly known as the World Wildlife Fund-India, was established in 1969 as a Charitable Trust under the Bombay Public Trusts Act 1950. Today, WWF-India is the country's largest conservation NGO with a network of State/Divisional and Field Offices spread across the country. Its Secretariat is in New Delhi. The organisation is part of the WWF family worldwide, with 25 independent WWF National Organisations, six Associates and 22 Programme Offices. The coordinating international Secretariat, the WWF International, is located at Gland in Switzerland.

WWF-India started life as a modest wildlife conservation organisation with a focus on protecting particular species of wild fauna. Over the years, the perspective broadened to encompass conservation of habitats, ecosystems and support to the management of the country's protected areas network. In 1989, WWF-India articulated its Mission as follows, to suit India's specific ecological and socio-cultural circumstances.

"The promotion of nature conservation and environmental protection as the basis for sustainable and equitable development".

The WWF-India Mission has five broad programme components:

- Promoting India's ecological security; restoring the ecological balance.
- Conserving biological diversity.
- Ensuring sustainable use of the natural resource base.
- Minimising pollution and wasteful consumption.
- Promoting sustainable lifestyles.

In achieving its mission, WWF-India uses the following main programmes methods: field programmes that serve as demonstration projects, public policy analyses and debates through independent research, consultation, and campaigns, education activities for key target groups, including the youth, professionals and administrators, communication through multimedia approaches, networking and supporting the work of fellow NGO's in India, and mobilising necessary financial, scientific and technical resources.

Published in September, 1997

Suggested Citation: **Ahmed, A. (1997) Live Bird Trade In Northern India, TRAFFIC-India**

Layout, designed and printed at : *Parallel Lines Editorial Agency Pvt. Ltd.*

Published by Avenash Dutta for and on behalf of WWF-India (TRAFFIC-India), 172-B, Lodi Estate, New Delhi-110 003.

COVER

Main : Alexandrine parakeet from the Punjab area is the most preferred Indian parakeet. Pix : Abrar Ahmed

Inset : A Spotted owlet which often falls prey to the practitioners of black magic. Pix : Abrar Ahmed

Below : Partridge fights were a favourite tradition among Indian villages. Pix : TRAFFIC India

Back : Dead Goldfinches. Pix : TRAFFIC India

PREFACE

In 1991, trade in live birds in India was totally banned in India. However, illegal activities have continued and it is alarming indeed that several endangered bird species are found in trade.

TRAFFIC-India, a programme division of WWF-India, was set up in 1992. One of its priorities has been to undertake a countrywide survey of the bird trade in India and examine the ramifications of the legal ban. This report, which looks at the live bird trade in Northern India, is a part of the detailed countrywide study. It accounts for more than 300 species, including some exotics, in trade.

The study is pioneering in its approach and analysis, for which the investigator deserves all praise. He has brought out several hitherto unknown aspects of the trade in birds in the country, and it is hoped that these will receive the serious attention of all those who are directly responsible for ensuring the protection of birds.

Samar Singh
Secretary General
WWF-India

12 September, 1997

FOREWORD

It is a very encouraging development that an increasingly large number of young people are taking wildlife studies as a profession. Generally birds and large mammals are their first choice for study. Bird research routinely falls into biological, ecological and/or community studies but Abrar Ahmed's "Study on Live Bird Trade in Northern India" is perhaps the first such type of investigation in our country.

Since the start of conservation movement in India, and subsequent total ban on bird trade, the bird trapper is a much despised individual, scorned by conservationists, animal-right activists and law enforcement officials. However bird trappers have a vast traditional knowledge, which this report has tried to document. That bird trappers are ingenious is clearly proved by the clever methods they employ to catch, transport, keep and trade wild birds, sometimes rare species, despite the total ban on such activities. Perhaps a bribe here and a threat there add flavour to their trade.

To study the extent of bird trade and route of transport, Abrar Ahmed employed his own creative methods to follow the trappers/traders without raising their suspicion. For the first time in India, exact trade routes within and outside the country are exposed. Nearly 250 Indian species and 72 exotic species in bird trade are documented; from the first step of catching to the end buyer stage are described. This excellent report has bridged the gap between the traditional and scientific knowledge. I look forward for similar reports from other regions of India.

The report contains bird species in trade, volume of trade, utilization patterns, relevant legislation and even the price list of birds. It ends in some highly commendable recommendations which if implemented properly would not only control illegal bird trade, but would also help the traditional trappers in continuing their vocation without putting rare species in peril.

Dr. Asad R. Rahmani
Director,
Bombay Natural History Society,
Mumbai

1 September, 1997

ACKNOWLEDGEMENTS

As is expected in any study of this magnitude a large number of people helped in the conceptualization, field research, analyses and production of this report. The contributions of two of them, Mr. Ashok Kumar, Ex-Director, TRAFFIC-India and Dr. Asad R. Rahmani, Director, Bombay Natural History Society, Mumbai are most significant. As joint supervisors of this project they guided, encouraged and saw the project through. Steven Nash, the then Director TRAFFIC, South East Asia contributed unknowingly through his inspirational study of the songbird trade of South-East Asia.

I am indebted to Ms. Chitra Narayanan, Dr. Asad R. Rahmani and Mr. Vivek Menon for helping me in writing, visualizing, and editing this report. At the TRAFFIC-India office my grateful thanks to Mr. Manoj Kumar Misra - Director and Ms. Fahmeeda Hanfee for extending their cooperation, Mr. Rahul Dutta for all the computer graphics, Ms. Sudha Mohan and Ms. Manorama Goswami who helped in various parts of analyses. Without their unfailingly cheerful support and help this report could not have been produced.

I am grateful to Mr. Samar Singh, Secretary General of WWF- India and other staff especially Mr. Avenash Dutta, Lt. Col. Gautam Dass, Mr. Tapan Ghosh, Mr. Prakash Rao, Brig. Ranjit Talwar, Mr. R.N. Goswami and Mr. S.N. Gupta for all their useful suggestions, help and support during this project.

I thank Mr. S.C. Dey - Addl. Inspector General (WL), Mr. R.K. Goel-Chief Wildlife Warden-Delhi, Mr. Kishore Rao - Deputy Inspector General (WL) at Ministry of Environment and Forests and Mr. Surender Kumar, Regional Deputy Director Wildlife Preservation (NR) & Assistant Management Authority (CITES) for carrying this research further by funding the forthcoming portions of this study and all their useful discussions for this report.

I sincerely thank my wildlife teachers, colleagues, well wishers and friends especially (in alphabetical order) Prof. Abbas Musavi, Dr. Anwaruddin Choudhury, Mr. Arpan Sharma, Ms. Alka Tomar, Mr. Bikram Grewal, Dr. B.C. Choudhury, Mr. C.M. Seth, Ms. Carol Inskipp, Mr. Daman Singh, Mr. Hilal, Dr. H.S. Yahaya, Dr. Iqbal Malik, Dr. Jamal Khan, Mr. J.C. Daniel, Dr. Jamil Urfi, Ms. Joanna Van Gruisen, Ms. Meenu Ratnani, Mr. Mehboob Alam, Dr. Pratap Singh, Prof. P.C. Bhattacharjee, Mr. Praduman Singh, Dr. Qamar Qureshi, Dr. Rahul Kaul, Mr. Ritwick Dutta, Dr. Satish Kumar, Dr. S.P. Goyal, Dr. Salim Javed, Mr. Santosh Babu, Mr. S.K. Mukherjee, Ms. Sangeeta, Mr. Tapan Chowdhury, Mr. Tim Inskipp, Mr. Vijay Kutty, Dr. V.C. Gogate, Mr. Virender Kumar and Mr. Zafar-ul-Islam for keeping my inspirations high throughout the study and helping in one way or the other.

Last but not the least, I must make a special mention of many indigenous trappers who shared their tribal knowledge and wisdom thus providing invaluable help for this study.

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SUMMARY

Since 1991 there has been a complete ban on the trapping and trade of Indian wild birds. But the ban appears to be only on paper as illegal trade in wild birds flourishes in almost all cities, towns and rural hamlets of India. Traditional trappers from tribes such as the Baheliyas, Chirimars, Pathamies continue to indulge in the trade as their livelihood depends on it. But perhaps the main culprits are the city based dealers who mastermind trapping operations for commercial purposes.

This report is based on the findings of 64 surveys conducted in 57 trading establishments/ trapping areas in 36 cities of northern India. Spread over all four seasons, the survey findings revealed that at least 250 species belonging to 51 families and 7 sub families were being traded in the northern Indian market. In the course of the surveys, nearly 64,500 specimens were observed. In other words, each survey yielded an average of 1,000 birds.

The bulk of the trade was in parakeets and munias. They were the most frequently encountered species, and were observed in nearly all the surveys. Among the parakeets, the Roseringed parakeet *Psittacula krameri* dominated the trade (constituting 26.66 % of the trade composition) and was encountered in 57 of the 64 surveys. Among the munias, the Blackheaded munia *Lonchura malacca* was the most abundant (composition of 17.59 %) followed closely by the Red munia *Estrilda amandava* (10.80%) which however was the most liked avadavat.

Survey findings reveal that there are at least seven different purposes for which birds are captured. This perhaps explains why the bird trade is still so widely prevalent. Apart from usual practises such as keeping birds for pets, trapping them for food, zoological uses, sport and medicinal purposes, it was noticed that some new utilization patterns have emerged. It has been found that birds are captured for release functions and also for black magic and sorcery.

An alarming finding of the project is that globally threatened endemic species of the Indian subcontinent such as Swamp francolin *Francolinus gularis*, Green munia *Estrilda formosa* and Finn's baya *Ploceus megarhynchus* are traded at will in the local markets. Strangely, these three species are still listed only in Schedule IV of the Wildlife (Protection) Act, 1972. Survey findings show that among the protected species being traded, 16 species belong to Schedule I of the Wildlife (Protection) Act, 36 species are listed in CITES (Appendix I, II and III) and 3 species under the IUCN Red Data list.

The price of birds being traded in the market vary largely from species to species; some are traded for as less as a rupee and others touch the five figure mark. There appears to be no apparent logic behind the pricing. Though a large scale commercial operation with thousands of people engaged in the trade, the sad fact which has emerged from the survey is that only a few

masterminds have gained, while most of the traditional trappers' continue to be poor. While the ban on the trade came into force almost overnight, tribes such as the Baheliyas and the Chirimars, which have been engaged in it for centuries have not been given any alternate sources of employment and thus have no other option but to deal clandestinely in birds.

About 70 species of exotic birds were observed during the survey. It is therefore recommended that the captive bred exotic species such as Budgerigar *Melopsittacus undulatus* and Cockatiel *Nymphicus hollandicus* would be an ideal substitute for the wild caught bird trade in India.

The report highlights that regular smuggling of birds continues despite the ban, mostly routed clandestinely via Nepal and Pakistan. Stricter enforcement and proper training for the authorities could well curb this illegal trade. At the same time a humane approach should be adopted keeping in mind the plight of the impoverished bird trappers. Some kind of a rehabilitation programme is urgently required for them, perhaps in zoos or similar educational institutions.

This report is a beginning, as it covers only the northern Indian bird trade. The idea, admittedly an ambitious one, is to now to cover the entire Indian peninsula. This will provide a complete picture, enabling the formulation of proper conservation strategies.

INTRODUCTION

Historical background

Bird keeping in India has an ancient history. Parakeets and mynas have always been popular pets in royal courts, caged and kept as a source of entertainment. Since time immemorial pigeons have been used as couriers and have even shaped the course of many a battle. Other winged creatures such as the junglefowl have been reared by human hands only to end up on the dinner table.

Evidence of this close relationship between man and bird is found in several Medieval Indian paintings. A popular Indian folklore has it that the myna and parakeet were the model romantic pair. Not surprisingly, many poets composed lyrics on the entrancing duo and artists captured the pair on canvas. Reportedly, these two birds with the uncanny ability to mimic human voices were also a great favourite of Mughal Emperors. The Mughal Emperor, Akbar was said to be very fond of birds and besides the myna and the parakeet he had several other avian friends, keeping them for their song, exotic colouration and companionship. He also kept game birds like the partridges and quails, which were used for bird fights. And, of course, no royal court in those days was complete without the falcon, used as it was to hunt game birds.

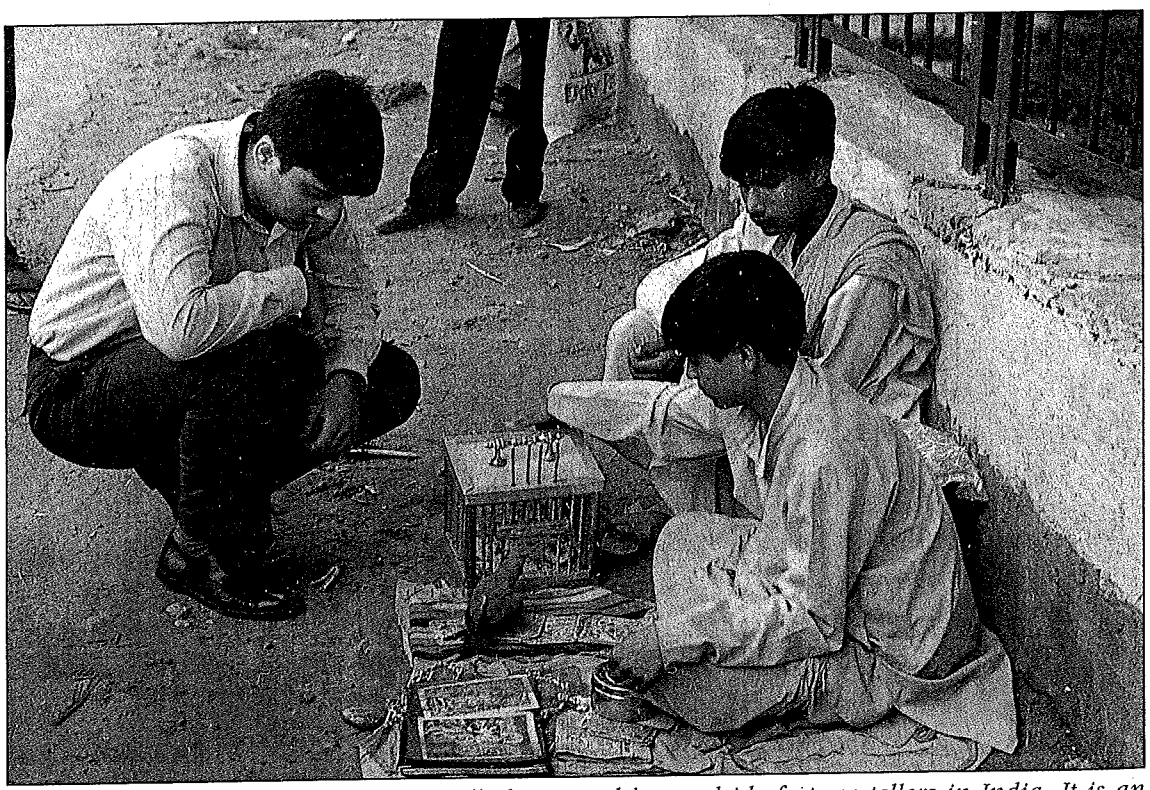
Akbar's biography *Ain-i-Akbari* gives graphic details of all the birds in his court. The manuscript is not only of great use to historians, but also provides ornithologists a peep into the bird world of the time, giving detailed accounts of at least 13 raptor species. Take this sample from Akbar's chronicles by historian Abul Fazl Allami: "From eagerness to purchase and from inexperience, people pay high sums for falcons. His majesty (Akbar) allows dealers very reasonable profits; but from motive of equity he has limited the prices. The dealers are to get their gain, but buyers ought not to be cheated." At the time, the Goshawk was considered to be the most superior bird, and was sold for 12 muhrs (gold coin) while common species like Shikra for 1/4 Rs. (muhr was made of about 8-10 gms of gold. The present value of one muhr is about Rs. 5,000). Dealings were done on the basis of the bird moults at the time of sale.

The *Ain-i-Akbari* also refers to the Mirshikaris, a clan dealing in birds, who were used by Akbar for falconry, trapping and hunting of animals. Even today this clan can be found in East India and they still eke out their existence by trapping and selling wild animals. The book describes how this clan used indigenous techniques to trap birds. For instance, nets and lime sticks made from the sap of *Ficus* species were used to capture birds and decoy owls were used to trap babblers. Some of these methods are still in vogue, used by traditional trappers in India for catching birds.

Every area in the country has its own history of bird keeping. The parakeet especially seems to have been a favourite everywhere. For instance in the Northern Indian state of Jammu and Kashmir, people consider it a great boon to own an Alexandrine parakeet from *Mansar*, a beautiful lake considered to be the abode

of fairies. The parakeet locally known as the '*Mansariya tota*' is kept by the locals as a mascot of good luck. Incidentally, this parakeet gets its common name because Alexander the Great is supposed to have taken it to Greece thus making it perhaps the first recorded Indian wildlife export. In fact, the Alexandrine parakeet has many names. In the north Indian state of Rajasthan, it is popularly referred to as *Hiraman* or *Gagruni tota*, since it was at one time widely prevalent in the Fort Area of Gagron in Jhalawar district. Today however, this bird has become locally extinct in the area. However, the legend of the Gagruni *tota* still survives. The story goes that in 1532 AD, when the Gagron Fort was conquered by Mughal King Humayun, an Alexandrine parakeet was interestedly observing the proceedings perched in its golden cage. Even as Humayun stopped to admire the bird, Roomi Khan, a minor king who had deserted the ruler of Gagron, Bahadur Shah, walked into the room. On spotting Roomi Khan, the parakeet promptly began screeching '*Gaddar, Gaddar* (traitor)". An amused Humayun observed that had these words been said by a man it would have spelt his death. The story also goes that the quick-to-learn parakeets of Gagron were trained by the local rulers to put burning sticks on cannons to set them off.

It's interesting to see how history has shaped the bird trade. For instance, when the English arrived in India, they made it fashionable to own exotic species such as Budgerigars, Cockatiels and Love-birds as pets. And it's not just the history books which record bird dealings. Even Indian religious texts have several references to the avian species. For instance, in both the *Ramayana* and the *Mahabharata* there are stories about kings keeping pet parrots. The two epics

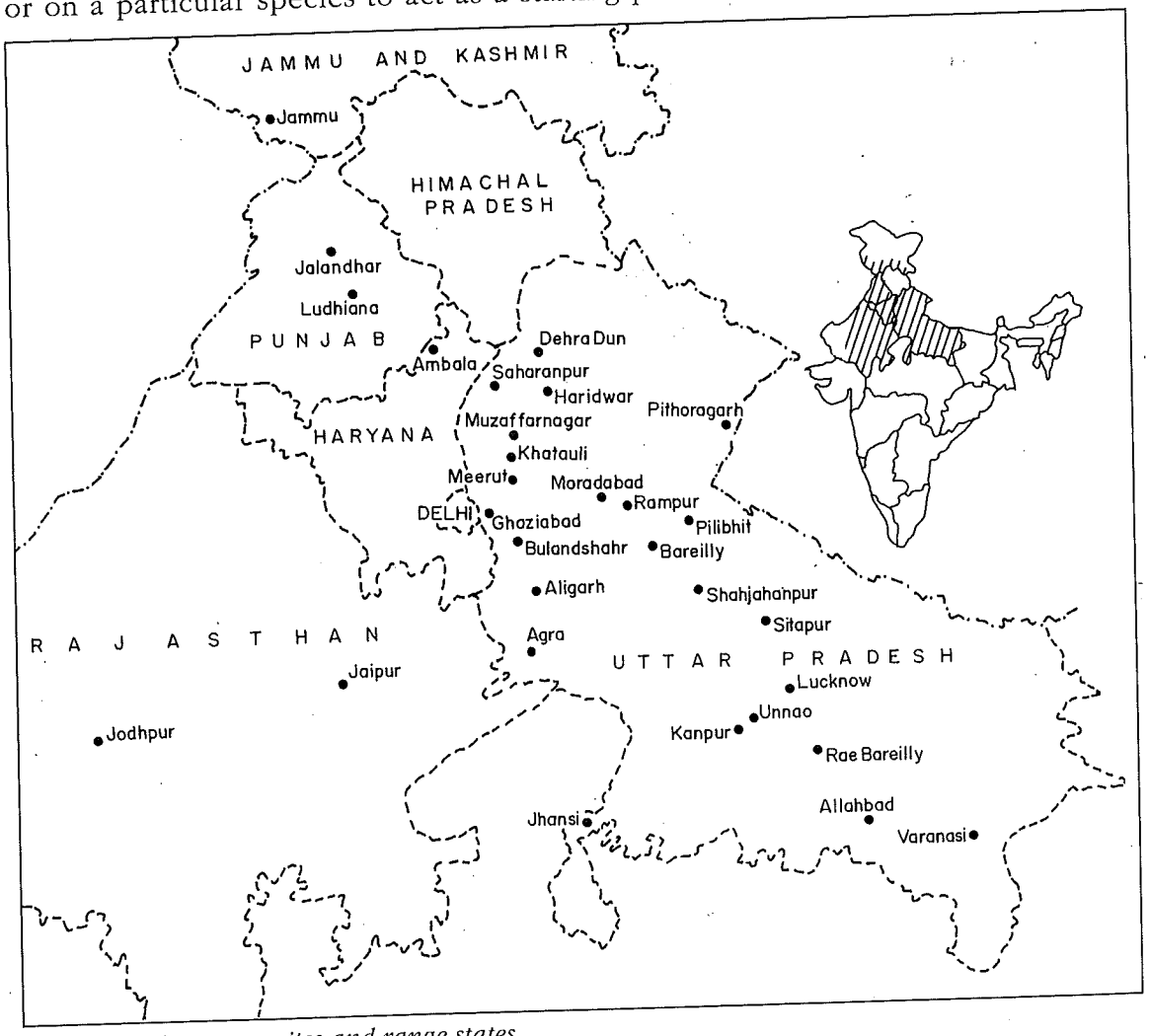


The Roseringed parakeet has traditionally been used by roadside fortune tellers in India. It is an integral part of India's culture and tradition. **Pix : Abrar Ahmed**

also make a reference to the Hindu Baheliya tribes (bird trappers). And, in the *Ramayana* several pet birds play a central part in the story — *Jatayu*, (Vulture) for instance. Perhaps the parakeet is the most revered bird in the country. Indeed, the Roseringed and the Alexandrine parakeet can be found in several Hindu temples where they are taught to chant the Hindu God Rama's name. Besides being a religious pet, parakeets are also considered to have divine powers. Even today, in the age of the internet and computer horoscopes, the streetside astrologer with a caged parakeet which can tell anyone's fortune is a common sight.

Project coverage

India is home to at least 1228 species of birds of which at least half figure in the bird trade in one way or the other. Thus, a study of the trade in live birds of India proved to be no mean task. Given the size of the country, there were bound to be logistical problems. Add to this the fact that all trade in wild birds in India is illegal. Thus the study had to be an entirely covert operation. Besides which, till date there has been no systematic study of the trade in either its entirety or on a particular species to act as a starting point. This study was therefore one



Map 1 : Major survey sites and range states.

TABLE - I

Live Bird Trade Survey Localities

State	City/Village/Town	Markets	Shops/Stalls	No. of Surveys
Uttar Pradesh	Agra	1	9	1
	Aligarh	1	2	1
	Allahabad	1	3	2
	Bareilly	2	10	1
	Bulandshahr	-	1	1
	Dehradun	1	10	1
	Ghaziabad	2	3	1
	Hardwar	1	4	2
	Jhansi	1	10	1
	Kanpur	4	15	1
	Lucknow	4	30	3
	Sardhana	-	10	2
	Meerut	2	6	2
	Moradabad	1	10	2
	Muzaffarnagar (Khatauli)	-	1	1
	Muzaffarnagar	1	2	1
	Nainital	1	2	1
	Nainital (Haldwani)	2	4	3
	Bhikaripur	1	4	1
	Pithoragarh	Trapping Area		2
	Raebareilly	1	4	1
	Rampur	1	15	1
	Saharanpur	1	2	2
	Kherabad	1	8	1
	Sitapur	1	4	1
	Varanasi	1	16	1
	Shahjahanpur	1	6	1
	Bhagarmo	2	6	1
	Unnao	2	10	3
Delhi	Delhi	5	20	9
Rajasthan	Jaipur	5	8	5
	Jodhpur	1	3	1
Punjab	Ludhiana	5	2	1
	Jullandar	1	5	1
Haryana	Ambala	1	10	4
	Jaghadiri	1	1	-
J & K	Jammu	1	3	1

of the most ambitious ones undertaken by TRAFFIC-India, since its inception in 1992. Starting as it did with these hurdles, the study had to have a very strong conceptual and planning background.

As it was first conceived in end 1992, the live bird trade study was supposed to concentrate on the state of Uttar Pradesh and later move on to other areas of the country. This was primarily because the author was conversant with this particular area and also because of the proximity of the state to New Delhi, the

secretariat of WWF-India / TRAFFIC-India. However, as the plan progressed through the early part of 1993, it was seen that in many cases geographical extensions were necessary. For instance, there was often a compelling need to follow a particular consignment to its logical end point — sometimes a place as far away as Calcutta in the eastern part of the country. Therefore, some geographical extensions were made during the field investigations. But these were later left out of the report on Northern India as a complete picture of those particular areas could not be ascertained in such a haphazard manner. In its final form therefore the proposed study for live birds has three phases:

a) Northern India with a special focus on Uttar Pradesh
b) Eastern and North - Eastern India
c) Peninsular India including Central, Western and Southern India

Initially, when the project first took off in early 1993, a four-year period was considered sufficient for the entire project report on live bird trade in India. However, the first phase, i.e the study of the Northern Indian markets, itself has taken nearly three years due to long periods of planning, questionnaire adjustment, field trials and the customary mistakes made and lessons learnt that go with any project. But it is hoped that with the experience gained during this report, the other two phases should be completed within a year each.

Survey methodology

The bird trade is one which, although illegal and conducted covertly, is widespread involving a large number of people. This report is based on first hand data collected during 64 surveys conducted between October 1992 to August, 1994 in Northern Indian states. The surveys were done in 57 trading establishment/trapping areas in 36 cities of Northern India (Table I & II). Out of the total surveys, 43 were in Uttar Pradesh. Surveys were conducted covertly in a non-random sampling fashion and concentrated on all those areas that either had a previous trade history or at places where the trade was actually happening. This included surveys in trapping areas (villages, towns etc.), in transit storage areas and at sale points.Private collections of individuals who possessed large number of bird species were also surveyed. During the analysis, surveys conducted outside the geographic limits of this report were left out to be included in the second and third phases of the report. Only those conducted in Northern India were used. To carry out investigations the author infiltrated the trade as a buyer and occasionally as a ficticious dealer — and then got survey questionnaires answered.

The questionnaire prepared not only dealt with the number and type of species present during the survey but also went into a lot of accessory information. For instance, it covered grounds such as the trade routes, a buyer profile, socio-economic factors, bird welfare, care, diet, etc. This report is pioneering as it reveals a large number of trade practices hitherto unknown outside the trade. However, an obvious limitation of the surveys was the inability to quantify mortality

TABLE - II

Number of individuals and species in different trade locations

Location of bird markets	Number of surveys	Maximum No. of indiviuals seen during one survey	Maximum No. of species
Agra, *Nai ki mandi*	1	1313	11
Aligarh, *Madaargate*	1	1712	10
Allahabad, *Dr. Kattju road*	2	1940	27
Bareilly, *New Kumar talkies, Biharipur*	1	1462	12
Bulandshahar, *Upperkot*	1	88	12
Dehradun, *Khurbura*	1	2103	7
Ghaziabad, *Kavinagar*	1	127	12
Hardwar, *before 10 Km.*	2	427	9
Jhansi, *Phasiyana*	1	1313	9
Kanpur, *Bagahi, Parade bazar & Lathiya-mohalla*	1	2510	25
Lucknow, *Nakhas*	3	2444	43
Lucknow, *Daliganj*	1	1924	9
Sardhana, *Church-fete*	3	1750	14
Meerut, *Lal kurtee*	1	1504	33
Meerut, *Gurdwara road*	1	446	25
Moradabad, *Kumar mohalla*	2	2043	14
Muzaffarnagar, *near Government hospital*	1	47	7
Nainital, *Opp. Roadways bus stand*	1	130	2
Haldwani, *Indiranagar*	2	400	11
Haldwani, *Botia paroa*	1	200	5
Pilibhit, *Bhikaripur*	1	210	5
Pilibhit, *Pakariya mohalla*	1	1636	15
Pittoharagarh, Trapping areas	1	139	23
Raebareilly, *Siddholi-kurri*	1	84	18
Rampur, *Purana ganj, Bilaspur gate*	1	4800	6
Saharpur, *Nawab ganj,*	2	292	4
Sitapur, *Chriya bazar, (Kherabad)*	1	2163	10
Sitapur, *Lalbagh*	1	1526	10
Shahajhanpur, *Govt. hospital road*	1	253	13
Unnao, *Chriya hat, Bhagarmo,*	1	103	10
Unnao, *Chirahat*	1	658	21
Unnao, *Talifsarai*	1	1404	52
Varanasi, *Baheliya tola*	1	2669	28
Delhi, *Jama Masjid*	5	3410	18
Delhi, *Minto road*	1	726	11
Delhi, *Moolchand*	1	169	10
Delhi, *Lajpat Nagar shop*	1	158	8
Delhi, *Kaka Nagar market*	1	72	5
Jaipur, *Chanpole*	2	467	11
Jaipur, *Loharon ka khurra*	1	73	4
Jaipur, *Jalupura*	1	634	9
Jodhpur, *Sardarpura market*	1	116	12
Ludhiana, *Islamganj and near bus stand*	1	802	1
Jullandhar, *Kishanpura*	1	333	3
Ambala, *Chirimar mohalla*	4	778	17
Jammu, *Gandhi Nagar*	1	664	20

in the trade. Although qualitative estimations were made, there was no way of judging mortalities in an illegal trade. In certain species and cases, some quantifications were possible and at best these could be taken as rough guidelines for the prevalent conditions of the trade. The report also relies heavily on anecdotal and first-hand knowledge of the bird trade culled from interviews held with experienced traders, aviculturists, trappers and local experts. The final section of the report relies on CITES published export data from India prior to the ban on export in 1990. Seizure data collected from government sources, newspaper clippings, informers and TRAFFIC-India's database is also used for comparative analysis. On the whole, therefore, a representative picture of the bird trade of Northern India has been pieced together. At times there may be gaps in information but then this points out areas for further research.

Limitations

Several limitations influenced the progress and course of this study. Some have been mentioned in the earlier chapter but other than these, there were smaller on-field realities too. To begin with, the survey had to depend on a number of anecdotal sources and the surveyor had to cull out verifiable or ascertainable facts from among them. The structure of the trade that involves a number of people catching, transporting and selling birds in very small localities as well as big metropolises involved a larger effort to ensure a representative segment of the trade. Also the nature of the surveys meant that only the domestic trade could be quantified and international trade was largely a matter of conjecture. Qualitative information on illegal international trade passing through the region is depicted in detailed maps. On the whole however, the report has tried to, as far as possible, quantify the trade and not rely on general qualitative statements. At the end of all three phases a comprehensive report with reasonably accurate quantifications can be expected for the entire country. The two geographic extensions are extremely important for the completion of this very important trade study. This is because of the following reasons:

1) A complete list of species in trade is impossible to compile if the other areas are not surveyed. For instance take the example of the parakeet. In Eastern India the Red-breasted parakeet is widely prevalent in trade whereas in the South, the lorikeet and the Bluewinged parakeet are the preferred species. In Northern India, on the other hand, the Roseringed, Alexandrine and the Plum-headed or Blossomheaded parakeet comprise most of the psittacine trade.

2) Trapping methods, modes of transportation and local welfare varies from tribe to tribe and area to area. A documentation of all the methods is essential to get a complete picture.

3) Trade routes are impossible to identify completely if the entire country is not covered.

4) Since several bird species are involved, it is very difficult to survey all of them in their respective seasons and therefore the volume of trade in regard to that particular species in a particular area remains largely undocumented.

Thus, at the half-way stage of the project, this report should be taken as capable of standing on its own for the limited geographic area it covers. However, it should also act as a precursor for the two other reports that will complete the country-wide picture. In presenting the large, uncontrolled extent of the trade despite a complete ban on domestic and international bird-dealing, this report is pioneering. It also contains the first ever list of trade names of birds (in the vernacular), the first ever quantification of the species traded and several other important trade details. Most important of all, the report has been compiled from active field research using completely innovative methodologies and undertaking considerable personal risks. As can be seen it is no mere office compilation of trade statistics. In this lies its singular importance.

RELEVANT LEGISLATION

The Indian Wildlife (Protection) Act (**WPA**) of 1972 (as amended upto 1991), bans the hunting and trade of all Indian wild birds, excluding those listed as 'vermin'. In 1990, export of live birds from India was totally banned. A year later, in 1991, local trade in birds was also banned. The official position now is that only the Common Crow ('Vermin' belonging to schedule V) can be hunted. Incidentally the WPA does not list Swifts or Swallows, a fact taken advantage of by collectors.

The Wildlife (Protection) Act, 1972 is applicable only to Indian wild animals included in Schedule I to V. WPA does not include the exotic birds and hence in our country trade in them is not regulated by any legislative measure. However domestic animals like *Gallus domesticus* (domesticated Red junglefowl) do not fall under the provision of the WPA.

Before the amendment in 1991 of the Wildlife (Protection) Act of 1972, about 20 bird species in Schedule IV such as munias, weaver birds, buntings and parakeets were allowed to be traded both in the domestic as well as the international markets. Before the ban in 1991, the domestic and international trade in live birds was regulated through licenses provided by the Chief Wildlife Warden of the concerned States and the Ministry of Commerce. The Chief Wildlife Warden was authorised to issue trapping license to a trapper subject to an annual quota of maximum 2000 birds. He also issued dealership licenses to dealers for domestic trade. The Ministry of Commerce used to issue import/ export licenses to a dealer on the basis of dealership licenses and Legal Procurement Certificate (LPC) by the concerned Chief Wildlife Warden. All the issued licenses for bird trade were cancelled soon after the ban on the trade. However, even before the ban, illegal practices were prevalent. For instance several traders, who had an annual quota used to hoodwink the enforcement staff by mixing commonly abundant species with globally threatened species such as Green munia and Finn's baya.

TABLE - III

Species in Schedule - I of Wildlife Protection Act, 1972

Common Names	Scientific Name
Spoonbill	*Platalea leucorodia*
Blackwinged kite	*Elanus caeruleus*
Honey buzzard	*Pernis ptilorhyncus*
Pariah kite	*Milvus migrans govinda*
Shikra	*Accipiter badius*
Pale harrier	*Circus macrourus*
Marsh harrier	*Circus acruginosus*
Tawny eagle	*Aquila rapax vindhiana*
Osprey	*Pardion haliaetus*
Cherrug falcon	*Falco biarmicus cherrug*
Laggar falcon	*Falco biarmicus jugger*
Peregrine falcon	*Falco peregrinus japonensis*
Shaheen falcon *peregrinator*	*Falco peregrinus*
Redheaded merlin	*Falco chicquera*
Common peafowl	*Pavo cristatus*
Indian pied hornbill	*Anthracoceros malabaricus*

Following the ban, for a few months, exotic captive-bred species such as Zebra finch, Cockatiel, Budgerigar, Java's sparrow and Bengalese finch were allowed to be exported. However, this permission was shortlived since it was found that many species like the Bluewinged minla, yuhinas and robin were being exported under the false cover of the exotics. Thereafter there is now a total ban on bird export, though there are evidences of illegal smuggling reported from Delhi airport. The export and import of any exotic bird is checked under the Import and Export Policy and controlled by the Indian Custom Act, which checks the inflow and outflow of any illegal consignment in or outside the country.

Import of birds is permitted against a license to Zoos and Zoological parks, recognized scientific/research institutions, circus companies, private individuals on the recommendations of the Chief Wildlife Wardens of the State Government subject to the provisions of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Thus the CITES office in Delhi coordinates the clearance of any bird brought to Northern India.

The import of birds in India was quite uncommon during the export permissible period of 1983-1990. It was shortly after the ban that one suspects an attempt was made to bring exotic birds into India. In 1994 end, a massive seizure of 20 species of parrots were made, as the consignment did not have appropriate CITES documents from the country of import. Other evidence of illegal smuggling of birds into India is the fact that many new varieties of exotics were spotted during the survey.

TABLE IV

IUCN Red Data List species observed in trade

Common Names	Scientific Name	Status
Swamp francolin	*Francolinus gularis*	Vulnerable
Finn's baya	*Ploceus megarhynchus*	Rare
Green munia	*Estrilda formosa*	Rare

As mentioned earlier India's wildlife is protected under The Wildlife (Protection) Act 1972 which extends to whole of India except for the state of Jammu & Kashmir (J&K) in Northern India. According to the (J&K) wildlife laws, permits can be issued for trapping and hunting of species other than Schedule I of J & K law which mentions eighteen bird species. The Jammu and Kashmir Wildlife (Protection) Act, 1978 has species listed under Schedules I to IV. Animals listed under Schedule I enjoy full protection while animals listed under Schedule II to IV can be trapped and hunted under the wild animal trapping license (form no. 6) with permission from the Chief Wildlife Warden who grants the permission based on the status of bird and objective of the applicant. Certain species, mainly game birds like waterbirds, sandgrouse, junglefowl, Chakor, partridges and quails, are permitted to be hunted under a license. Schedule I mentions 18 species but certain other species such as the Blacknecked crane needs to be brought from schedule IV to schedule I of the J&K wildlife act.

TABLE - V

CITES species observed in Northern Indian trade

Common Name	Scientific Name	Appendix
Cattle egret	*Bubulacus ibis*	III
Little egret	*Egretta garzetta*	III
Common pintail	*Anas acuta*	III
Gargeny	*Anas querquedula*	III
Shoveller	*Anas clypeata*	III
Black-winged kite	*Elanus caeruleus*	II
Honey buzzard	*Pernis ptilorhyncus*	II
Pariah kite	*Milvus migrans govinda*	II
Shikra	*Accipiter badius*	II
Buzzard	*Butea* spp.	II
Pale harrier	*Circus macrourus*	II
Tawny eagle	*Aquila vindhiana*	II
Saker falcon	*Falco cherrug*	II
Peregrine falcon	*Falco peregrinus japonensis*	I
Shaheen falcon	*Falco peregrinus peregrinator*	I
Redheaded merlin	*Falco chicquera*	II
Kestral	*Falco tinnunculus*	II
Sarus crane	*Grus antigone*	II
Demoiselle crane	*Grus virgo*	II
Alexandrine parakeet	*Psittacula eupatria*	II
Roseringed parakeet	*Psittacula krameri*	III
Red-breasted parakeet	*Psittacula alexandri*	II
Blossomheaded parakeet	*Psittacula cyanocephala*	II
Slatyheaded parakeet	*Psittacula himalayana*	II
Eastern slatyheaded parakeet	*Psittacula finschii*	II
Indian lorikeet	*Loriculus vernalis*	II
Barn owl	*Tyto alba*	II
Collared scoops owl	*Otus lempiji*	II
Great horned owl	*Bubo bubo*	II
Dusky horned owl	*Bubo coromandus*	II
Brown fish owl	*Kepupa zeylonensis*	II
Barred owlet	*Glaucidium cuculoides*	II
Jungle owlet	*Glaucidium radiatum*	II
Spotted owlet	*Athene brama*	II
Indian pied hornbill	*Anthracoceros albirostris*	II
Hill myna	*Gracula religiosa*	III

In the course of the surveys conducted for this project, 250 Indian species were spotted (see Chapter-III and Appendix-I) in the Northern Indian bird trade. A collation of the survey findings reveals that 16 species belong to Schedule I of WPA (Table-III) were traded while the rest belonged to Schedule IV except for the crow. Three species of birds namely Swamp francolin, Finn's baya and Green munia were found to be from the Red data list of birds (Table-IV). Among the birds found in trade, 36 species are found to be listed in the CITES Appendices (Table-V) which include two species of falcons belonging to Appendix I, 27 species of Appendix II and 7 species of Appendix III.

SPECIES IN NORTHERN INDIAN BIRD TRADE

The live bird trade in Northern India, whether for pet-birds, food or other purposes is extremely diversified and is likely to be the most species rich trade in India. *The TRAFFIC- India survey identified 250 Indian species belonging to 51 families and 7 Sub-families (Appendix - I) based on observations of more than 64,486 specimens in 64 surveys with an average of more than thousand birds per survey.*

The main list of the species in Northern Indian trade is based on direct sighting of the birds present in trade in large numbers prior to the ban such as the Whitebacked munia or species caught on special customer request such as

TABLE - VI

Composition of 80% of the bird trade by volume

Species	Source	Percentage of Total No. Observed	No. Observed
Roseringed parakeet	Wild	26.66%	16915
Blackheaded munia	Wild	17.59%	11159
Red avadavat	Wild	10.80%	6854
Scaly breasted munia	Wild	7.68%	4874
Alexandrine parakeet	Wild	7.50%	4763
Plum-headed parakeet	Wild	4.63%	2940
Budgerigars	Captive Bred	4.01%	2545
Whitethroated silverbill	Wild	3.09%	1963
TOTAL		**81.96%**	

horned owls and swallows which otherwise are rarely seen in trade. The highest species density displayed in one market was recorded to be 52 in a retail outlet at a bird bazaar in Unnao district of Uttar Pradesh state. Species diversity was maximum in winter due to the influx of winter migrants.

The highest number of birds seen at one time was about 4000 individuals sold during an annual one-day fair in Sardhana village in Uttar Pradesh state. At a retail outlet in Lucknow, up to 2400 specimens of 43 species were spotted. (see Table II)

Demand for a species in domestic and former international trade is indicated by the high numbers held or displayed by the traders and also recorded during the surveys.(Table VI & VII).The ten most abundant Indian species seen during the surveys in descending order of numbers were the following : Roseringed parakeet *Psittacula krameri*, Blackheaded munia *Lonchura malacca*, Red munia *Amandava amandava* Scaly breasted munia *L. punctulata*, Alexandrine parakeet *P. eupatria*, Plum-headed parakeet *P. cyanocephala*, Whitethroated silverbill or

munia *L. malabarica*, Baya weaver *Ploceus philippinus*, Rock pigeon *Columba livia*, Streaked/Black breasted weaver *P. benghalensis & manyor* (Table-VI shows the numbers observed of each of the species).

The 15 most frequently encountered species in Northern Indian trade during the 64 surveys, in descending order were the following : Roseringed parakeet (89%), Alexandrine parakeet (81%), Red avadavat (68%), Plum-headed parakeet (67%), Blackheaded munia (64%), Scaly breasted munia (64%), Whitethroated silverbill (54%), Rock pigeon (40%), Budgerigar (40%), Cockatiel (26%), Zebrafinch (26%), Grey francolin (25%), Hill myna (23%), Java sparrow (23%), Lovebirds (23%), Assorted mynas - Common myna, Asian pied starling and Bank myna (23%). Among the above species Budgerigar, Cockatiel, Lovebirds, Java's sparrow and Zebra finch are purely captive bred. Most of the wild species listed above are caught in village fields or forests, but the Hill myna arrives from north-east, eastern, central and south India.

TABLE - VII

Species appearing in trade in 15 or more of the 64 surveys

Species	No. of trade localities
Roseringed parakeet	57
Alexandrine parakeet	52
Red avadavat	44
Plum-headed parakeet	43
Blackheaded munia	41
Scaly breasted munia	41
Whitethroated silverbill	35
Rock pigeon	26
Budgerigar	26
Cockateil	17
Zebra finch	17
Grey francolin	16
Hill myna	15
Java sparrow	15
Lovebird	15
Common myna, (Asian pied starlings & Bank myna mixed)	15

The wild bird trade in Northern India is of a scale and scope far greater than imagined with dealings in many foreign species. After the ban on the Indian wild bird trade in 1991, there was a sudden shift of activity in the exotics which led to a proliferation of new species in the trade. Dealers and traders began to focus their energies on popularising the exotics, thrusting

TABLE - VIII

Ranking of five exotic species in trade by volume (Captive bred)

Species	No. Observed	No. of trade localities
Budgerigar	2545	26
Zebra finch	546	17
Lovebird	419	15
Java sparrow	223	15
Cockatiel	206	17

TABLE - IX

Ranking of 20 Indian species in trade by volume

Species	No. observed	No. of trade localities
Roseringed parakeet	16915	57
Blackheaded munia	11159	41
Red avadavat	6854	44
Scaly breasted munia	4874	41
Alexandrine parakeet	4763	52
Plum-headed parakeet	2940	43
Whitethroated munia	1963	35
Baya weaver	1606	8
Rock pigeon	1159	26
Streaked/Black breasted weaver	1111	8
Green avadavat	1065	6
(Common myna, Asian pied starling & Bank myna)	897	15
Yellow-breasted greenfinch	521	4
Hill myna	433	15
Quails (Rain, Yellow legged Button quail, Barred button quail)	335	7
Grey francolin	289	16
Redvented bulbul	243	9
Redheaded bunting	202	5
European goldfinch	195	4
Red-breasted parakeet	139	13

them on the domestic customers as well as breeding them. In all 72 exotic species including several captive bred birds such as Budgerigars, Lovebird and Cockatiels were seen during the survey (Appendix - II).

PRICES OF BIRDS IN THE NORTHERN INDIAN MARKETS

During the survey one of the most important parameters for investigation was to find out the prices of birds at different levels of trade. Appendix-I lists the prices of birds in Northern Indian bird trade at two different levels — trapper or sub-dealer level and the retail outlet level.

The price of birds ranged from a lowly sum of Rs. 1.00 per bird to a whopping five figure mark. The widespread variation in prices is due to a number of factors, such as high demand, easy trappability, how endangered the species is and most importantly whether it is saleable. High demand for a species such as the parakeet automatically ensured that the price of the bird would not drop. At the same time because of the common availability of the bird, as well as its easy trappability the price was not very high either. However an easily trappable species such as the Great horned owl commanded a whopping figure in the market since it is only on specific demand that the bird is captured. This also explains the reason behind the high prices of raptor species which are highly specific in demand, easily trappable however few in numbers.

As is evident from the price list (Appendix I) in many cases there is a tremendous difference in rates from the trapper level to the retail outlet level. This was because the dealer would include the price of feeding the birds, transporting it and maintaining it. For instance, the popular songster Shama is easily trappable, hence at the trapper level it sells for as low as a sum of Rs. 25. However since the bird is a specialised insect feeder the dealer has to take on a lot of labour to obtain its feed. Besides which, in the early days of captivity, the bird has a high record of mortality. This explains why at the buyer level the cost shoots up. Another reason for the variation could be the risk factor involved in transportation. In cases where the bird is trapped and sold locally, the price remains low. However if the same bird has to be transported to a distant market, its price automatically shoots up.

An interesting observation during the surveys was that certain exotic species such as the Fisher love birds which are native to Africa were being sold for Rs. 300 to Rs. 400 a pair — an absurdly low figure considering the high costs of air-freight/import. It was also observed that the price was the same for this species in most of the American and European markets as seen in advertisements in pet magazines such as Cage and aviary birds, Pet bird hobbyist etc. The relatively cheap price for the love birds in India is explained by the fact that all these birds are actually captive bred here. On the other hand exotics such as macaws and cockatoos command a very high price. The reason for this is that there are only a few individuals of this species in India which were imported at a very high cost prior to the ban. These birds are also very costly to maintain, with a specialised breeding cost and also have very low natalities.

A surprising finding was that a species considered by the scientific community to be very rare or endangered did not really merit a high price among the trappers. This was because the trapper/ dealer was totally unaware of the fact that the bird in question was endangered, purely because it has no market value.

Unless the whole countrywide price list is obtained, a complete picture cannot emerge. For instance, a bird found in the north east region of India which sells locally for a cheap price may command a huge price in the northern market, leading us to wrong inferences at present. The actuality may be that the bird has passed through many sub-dealers and hence the price would obviously be high.

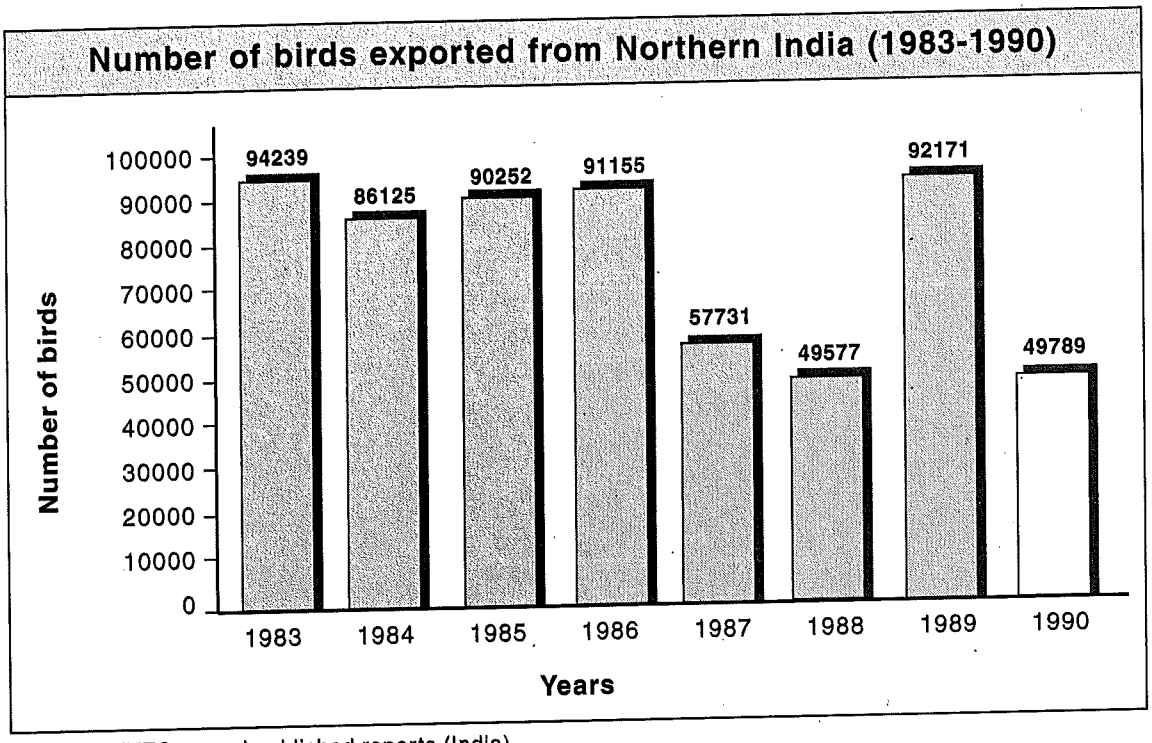
VOLUME OF TRADE

One of the most challenging aspects of the survey was to estimate the volume of the birds traded which cannot be readily quantified but surely seen and said to be very high. The data obtained from the surveys allows only a very rough estimation of the actual picture. And estimates made on volume kept fluctuating. In this context, a study done on waterbirds proved quite alarming. During the field survey in waterbird trade areas, the average number of waterbirds traded in an establishment was about 100 birds per week or 400 birds in a month. The calculation arrived from this survey figure had horrendous implications. For, if one estimates the waterfowl season to last for five months, it means 2000 birds are sold in one season from a single market place. If there are 20 known prominent establishments in the state of Uttar Pradesh alone, it means 40,000 waterbirds are sold in one season. If data is taken in the respective season from all water birds markets in Northern India or entire India, surely several thousand waterfowls, apart from cagebirds are killed every year. Most of the rural and local trade goes undocumented. Among the table birds, apart from waterbirds, Blue rock pigeon, Grey and Black partridges, doves and small galliformes are killed and sold in large numbers which remains undocumented. In the case of table birds, the trapper slaughters the birds immediately after returning from his trapping mission or otherwise delivers the birds to the regular buyers. This massive local consumption remains unquantified due to the secretive nature of the trade. Mature individuals of species such as Indian peafowl largely used as table birds never reach the markets due to their large size and are often consumed by trappers themselves or permanent customers. Taking account of such data for quantification was almost impossible to monitor.

A comparison of the volume of trade in birds in Northern India reveals that passerines are the most preferred and the bulk is made up by parakeets and munias which account for nearly 80% of the trade. (Tables VI & IX). Surveys done in major munia trapping areas (refer Map 2) revealed that between 10,000 to 20,000 munias are caught annually around Moradabad, Lucknow, Sitapur, Meerut, Varanasi, Rampur, Bareilly and many other places. Similar is the case of the parakeets, especially the Roseringed parakeet which is caught throughout the year in hundreds, in almost all the areas where trappers abound. The retail outlets including hawkers such as Jama Masjid in Delhi, Baheliya Toli in Varanasi and Nakhas bazaar in Lucknow record a sale of more than 200 to 300 birds per day and the number exceeds 1000 birds on main weekly bazaar days (Sunday). The bulk of birds sold are parakeets especially the Roseringed, Alexandrine and Plum-headed parakeets, and munias, notably the Red munia, Blackheaded and Scaly breasted. Captive bred exotic species in trade such as Budgerigars were roughly estimated to comprise about 20% of the trade. Therefore it is estimated that not less than 100,000 birds are traded from these main markets of Northern India annually.

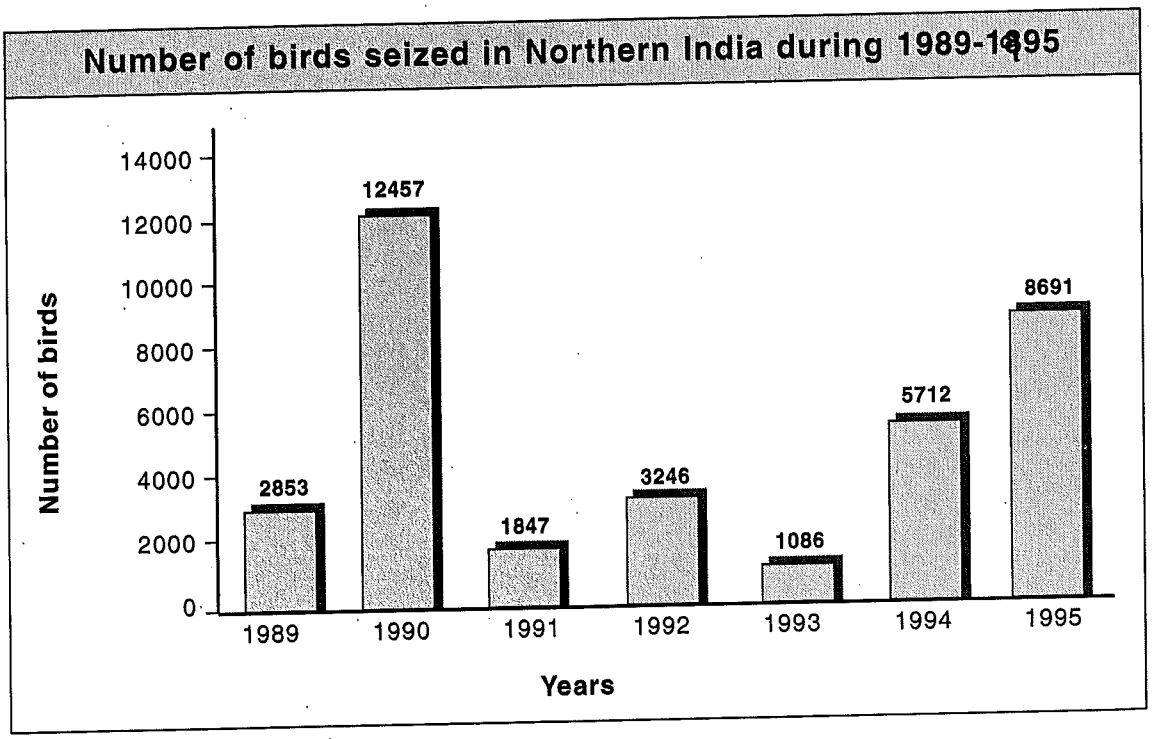
Prior to the ban on export in 1990, the volume of documented trade in published reports of CITES Management Authority of India show the regular export of species such as Roseringed parakeet, Alexandrine parakeets, Plum-

CHART-1



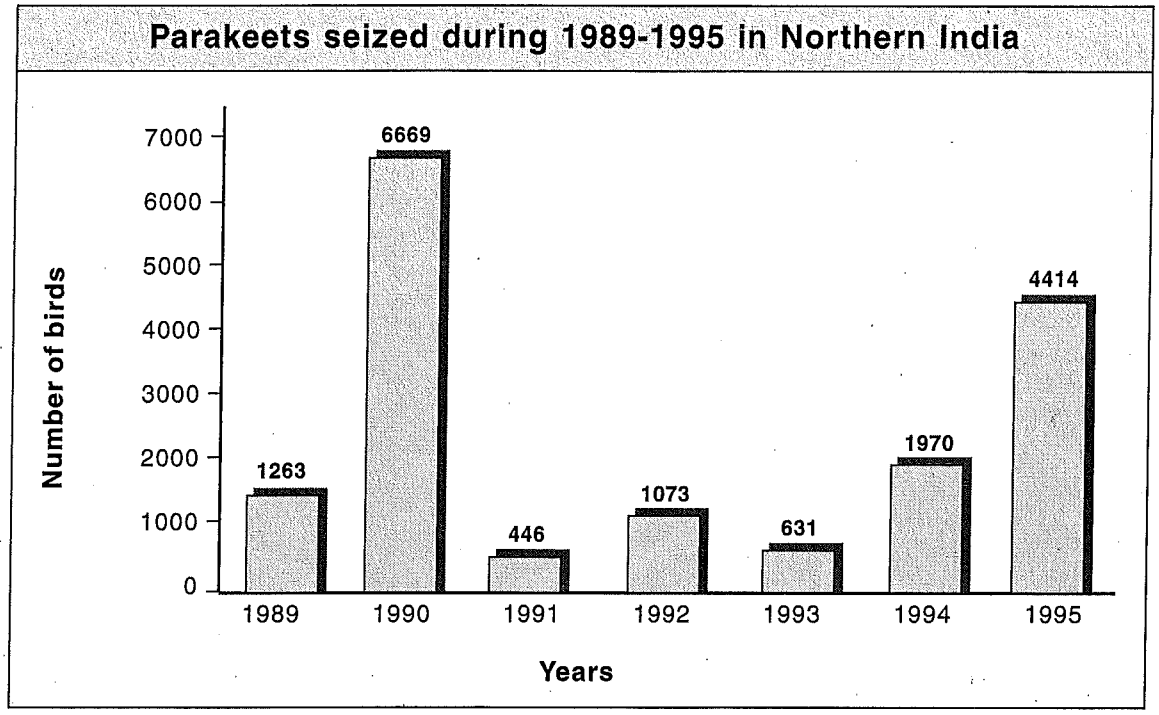
Source : CITES annual published reports (India).

CHART-2



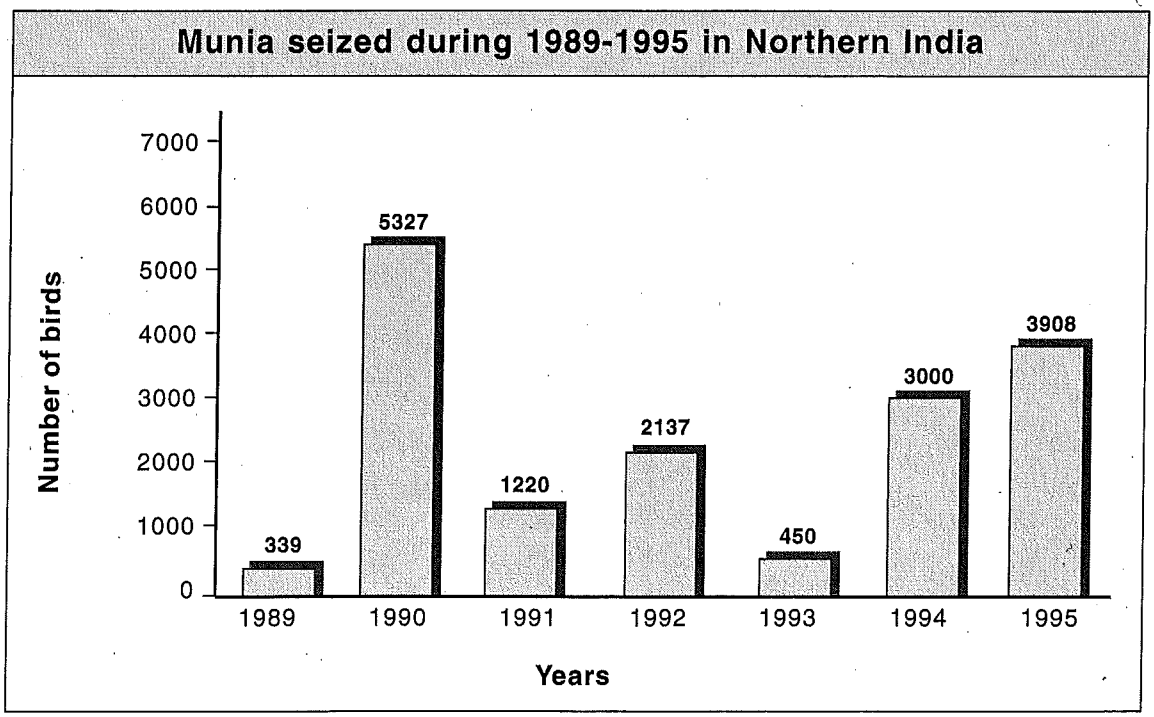
Source : TRAFFIC India database.

CHART-3



Source : TRAFFIC India database.

CHART-4



Source : TRAFFIC India database.

headed parakeet, Red-breasted parakeet, Slatyheaded parakeet, munias (Red, Blackheaded, Scaly breasted and Whitethroated), Red and Blackheaded buntings and Weaver birds including Baya, Streaked and Blackthroated. (see Table X).

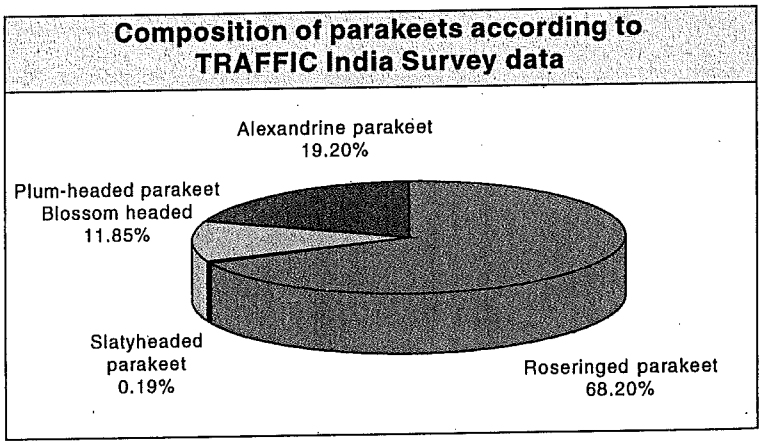
The total number of bird exported during eight years from 1983-1990 (Chart 1) in Northern India totalled 611039 bird, were legally exported from Delhi. These figures are only from the documented trade while the domestic trade, undocumented exports and type of species traded illegally remains unknown.

The number of reported seizures from the illegal trade between 1989 to 1995 (Chart 2) reveals that 12,457 birds were seized in 1990, the year the trade was banned. This is in contrast to the number of seizures in 1989 where only 2853 birds were recovered and 1991 when only 1847 birds were seized. The probable reasons for the high number of seizures in 1990 could be the fact that traders aware of the impending ban decided to take advantage of the legal channels to pass off banned birds. Another reason could be heightened vigilance by the authorities since the law was just being amended. However, surprisingly enough, the seizures have risen again in recent years with 8691 birds reported to have been confiscated from Delhi alone in 1995..

The maximum number of seizures were of munias and parakeets. This goes along with the survey findings where also the two species dominated the trade in terms of 80% of volume. The tables below give the data of seizures of the respective species.

An analysis done on the percentage of munias and parakeets in trade shows the following results :

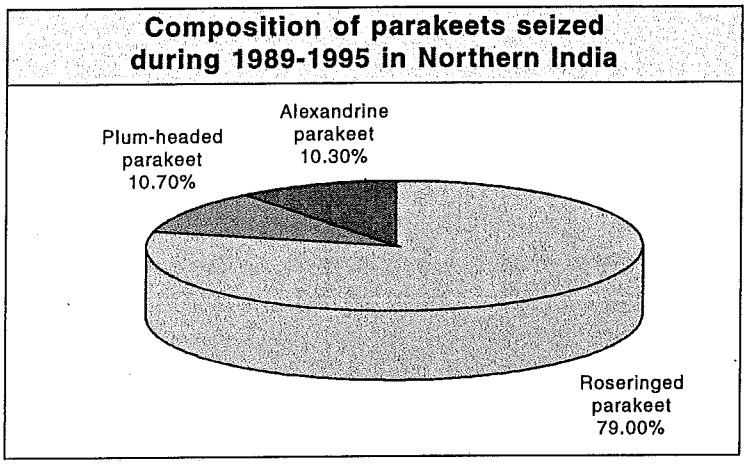
CHART-5



According to the TRAFFIC-India survey, the composition of parakeet species was as follows: Roseringed parakeet (68.20%), Alexandrine parakeet (19.20%), Plum-headed (11.08%), Red-breasted (0.56%) and Slatyheaded parakeet (0.19%). (see chart - 5 & 6). However, as per the seizure data, the composition of parakeet species captured during the years 1989 - 1995 in Northern India was: Roseringed parakeets (79%), Plum-headed parakeet (10.7%) and Alexandrine parakeet (10.3%).

There are many discrepancies in the TRAFFIC survey and the seizures data, as revealed in the pie charts. For instance, according to the survey data, 69% Roseringed parakeet were found, while the seizure data shows a 10%

CHART-6



Source : TRAFFIC India database.

difference. Similarly there is a difference of 9% in the two data sets where the Alexandrine parakeets are concerned. The seizure data shows no confiscation of Red-breasted and Slatyheaded parakeet in a period of seven years which shows a probability of error or chances of non accountability or unfamiliarity with the species.

CHART-7

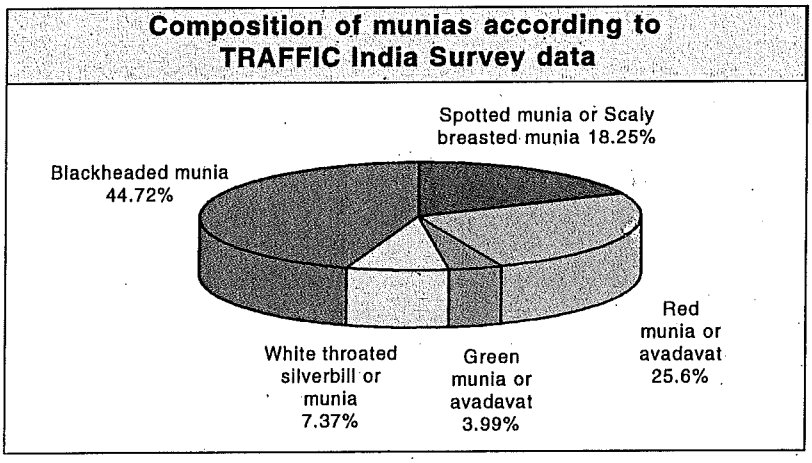
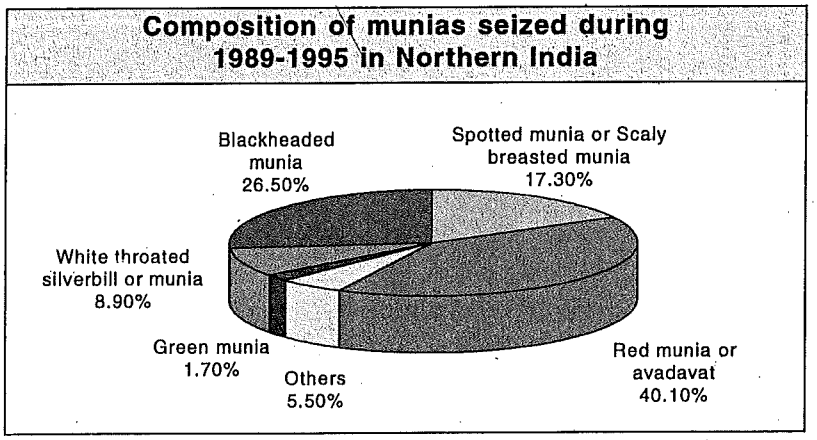


CHART-8



Source : TRAFFIC India database.

As per the TRAFFIC-India survey, the composition of munia species is: Blackheaded munia (43.06%), Red munia (26.44%), Spotted munia (18.80%), Whitethroated munia (7.59%) and Green munia (4.11%). (see chart -7 & 8). However, figures available in the seizure data shows the composition of munias captured in Northern India during 1989 - 1995 (Chart 4) to be: Red munia (40.1%), Blackheaded munia (26.5%) Spotted munia (17.3%), Whitethroated munia (8.9%), Green munia (1.7%) and remaining 5.5% of mixed species mentioned above.

A comparative look at both data reveals a drop of 16.56% in the Blackheaded munia species in the seizure data while there is an increase of 13.7% in Red munia. TRAFFIC - India data shows 2.41% more percentage of Green munia in trade.

TABLE X

Legal export of birds from Delhi Airport (1981 to 1990)

Common Name	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Alexandrine parakeet	3207	6144	2737	2305	5546	3145	1919	2829	5014	1587
Blossomheaded parakeet	7150	9710	4373	1966	9050	4929	3002	2595	4296	3397
Slatyheaded parakeet	-	-	320	-	240	-	-	-	-	-
Redbreasted parakeet	-	-	5140	791	3307	1667	2349	2001	1949	997
Roseringed parakeet	-	-	17689	1142	28195	26235	13755	10438	24715	21644
Munia (Red, Spotted, Blackheaded, Whitethroated)	-	-	52661	40974	35228	42710	26993	22820	34562	8877
Baya	-	-	2112	2845	2453	2582	2416	1959	4704	1238
Buntings (Redheaded, Blackheaded)	-	-	3677	1048	2907	5215	3682	3367	12024	1385
Myna	-	-	3916	3976	2500	3867	2858	3307	4149	1585
Pigeon	-	-	426	31078	-	-	14	-	6	-
Peafowl	-	-	-	-	-	-	-	-	2	-
Yellowthroated sparrow	-	-	1188	-	826	746	743	256	-	604
Whitewinged wood duck	-	-	-	-	-	52	-	-	-	-
Monal (Hornbill?)	-	-	-	-	-	5	-	-	-	-
Eagle	-	-	-	-	-	1	-	-	-	-
Siberian Crane	-	-	-	-	-	1	-	-	-	-
Whitebacked vulture	-	-	-	-	-	-	-	1	-	-
Painted stork	-	-	-	-	-	-	-	4	-	-
Zebra finch	-	-	-	-	-	-	-	-	750	6925
Bengali finch	-	-	-	-	-	-	-	-	-	1508
Budgeriger	-	-	-	-	-	-	-	-	-	42
Japanese Quail eggs	-	-	-	-	-	-	-	-	20400	-
Peacock tail feathers (in pcs.)	-		-2864179	1490640		-	-	2997261	2609027	20790000	2570440
				308000 articles					+ 320 kg		

Source : CITES published report (India).

BIRDS OF A FEATHER : CASE STUDIES

Munias

Munias or avadavats belong to the family Ploceidae, which is one of the commonest families of passerines in the country. Other members of this family are sparrows, snow finches and weaver birds. The munias belong to the sub-family Estrildinae which has seven recognized species in India. All the seven species are known to be in the trade although only six of them were spotted during the surveys. The Rufous bellied munia *Lonchura kelartii* which inhabits the southern parts of the Eastern and Western Ghats in India (Ali and Ripley 1983) could conjecturally figure in the Southern Indian trade. Of the remaining six species, four figure among the top ten species traded in Northern India (see Table VI) making this family one of the most significant in terms of the bird trade.

Munias are preferred cage birds due to a variety of inter-connected reasons. For one, they are extremely hardy birds and therefore easy to keep in captivity. Besides they have a granivorous diet that is easy to procure. Their small size allows a large number to be kept together in small confines and then of course, they have a mass appeal thanks to their colourful appearance. Add to this, their dulcet tones — munias are preferred songbirds with a variety of trills and chirps — and it's not surprising that the bird has such a high demand and is trapped year-round. The birds are caught irrespective of the season as customers have negligible preference for adult or juvenile birds. Although juveniles cost less, adult munias too are readily accepted in the market since they are very colourful cage birds. This is in direct contrast with other families such as psittacines where customers show a distinct preference for juveniles. Although trapping occurs all through the year, it is maximum between June and August which is just before the start of the breeding season.

Munias are hardy captive birds and can live for as long as ten years in captivity. However, with the exception of *Lonchura malabarica*, very little attempts have been made in India to breed them in captivity. The reason could be that they are easily available and at a low price.

Although little scientific work has been done on the munia population ecology, several reports have noted patchy population increases and decreases. Perhaps this is because of excessive trappings in some areas and subsequent release of birds in others. The largest centres of munia collection in Northern India are Varanasi, Lucknow, Kanpur, Sitapur, Rampur and Moradabad.

Red munia or avadavat (*Estrilda amandava*)

Red munias ranked third in terms of volume and occurrence in the surveys in Northern India. World over too they are one of the most common and preferred cage birds. The term *avadavat* which is used for the bird is believed to be a corruption of Ahmedabad, the city from which the birds were first exported 200 years ago (Ali and Ripley 1983). The bird has a wide distribution throughout

the country specially in swampy grasslands, sugarcane fields and tall grass cover. The birds are normally found in small groups of 30 (Ali and Ripley 1983) and more when not in their breeding season.

During the survey, the Red munia was observed in 68% of the markets.A total number of 6854 birds were sighted in 44 surveys. An analysis of the composition of bird trade in Northern India concluded that Red munia contributed 10.8% ranking behind the Roseringed parakeet *(Psittacula krameri)* and the Blackheaded munia. *(Lonchura malacca)* (Table VI). In Uttar Pradesh it was observed that people of all sects and castes kept the Red munia as there is a popular lore associatied with the bird. A common belief in the state is that if a munia is kept as a pet in a household, it takes on any misfortune that would otherwise befall the family. If the bird dies in captivity, it is thought to be the result of its absorption of the household evils and is therefore not a cause for concern. The replacement of any bird that dies is also linked to this belief as people like to keep the bird in their house to ward off all evil. During the survey, it was seen that many pet owners kept about 50 munias. Certain houses in Varanasi and Lucknow even owned as many as 300 munias. In these cities it was also observed that the birds would be released annually in January and replaced with new juvenile stock. This was not observed to be part of any religious ritual.

An interesting phenomenon noticed in this species, as with *Estrilda formosa* was the tendency of the captive specimens to go bald. This was most commonly observed in cases where juveniles were kept in cages. The reason could be that as the juveniles attain maturity they display territoriality. Adult males fight with each other and these fights result in baldness at the sides of the head and neck. This phenomenon was not observed when mature birds of more than 4 months were introduced to captivity. During the survey, it was also seen that Red munias existed in varying colours ranging from red-brown to orange-red to blood red and some even with tinges of black. While the first two colours are characteristic of a bird that attains maturity in captivity, the third is characteristic of a wild bird that has been captured after attaining its colour.

The black tinge to the red which over a period of time turns completely black is caused by a totally granivorous diet in captivity and exclusion of insect food. The Red munia is normally trapped using two methods: the funnel net and the bait- camouflage method. The funnel net is an ingenious contraption that is placed in the night and can capture all the birds roosting at a particular spot at any given time. The other trapping method involves the baiting of the bird on successive days with succulent morsels and then its capture using a camouflaged net. This is normally done in winters when the birds descend to feed almost throughout the day unlike in hot seasons. A method used to trap birds by aviculturists (never by professional bird trappers) is the automatic bird trapping cages sold in bird markets. The cage has pet munias in it that attracts any passing munia (normally wild red munias do not get trapped in this fashion) to enter and the door automatically shuts in behind the bird. Once trapped, the munias are fed with bird-seed *(Kakun* or *kangni)* which is readily available in

the bird markets. Often munias die in captivity as the pet owner does not realise a few essentials. For instance, using the correct method of placing water can lessen mortality. In captivity birds are unable to drink from deep water dishes. Trappers normally place water in shallow pans. Wire cages are also a reason for death in captivity during the first night of capture as the bird repeatedly strikes against the wire mesh in a bid to break free. This can be prevented by using cloth cages, a method commonly practised by trappers in Uttar Pradesh.

The price of a particular species fluctuates from season to season. It even changes from male to female and from a breeding one to a non-breeding one. A trapper sells a bird for anything between Rs. 1.50 to Rs. 10 whereas a dealer charges anything between Rs. 3 to Rs. 50. So much so that in the months of October, November and December a dealer earns a whopping profit of 400% per bird.

From mid August to November traders dye all female birds in one colour to make them look as though they belong to one single species. Such strange coloured birds attract a large number of buyers. Ironically, the birds benefit from the colouration because by February when the colour wears off even from the breeding males the buyers release the now unattractive birds. Such is the extraordinary appeal of a munia that it is one of the most sought after Indian birds. It is a popular pet with people of all religions, aviculturists, hobbyists and even the occasional bird buyer. Apart from providing companionship the bird is used marginally in Uttar Pradesh for medicinal (curing epileptic fits) purposes and in certain cases even in some forms of sorcery.

Due to excessive capture, vanishing habitats and the problem of pesticides, the Red munia is becoming increasingly rare in some areas where they are normally found and the number being found in the trade is also decreasing. During the survey in Uttar Pradesh, trappers on being questioned revealed that their catch in isolated areas had declined especially within the last five years. Another factor for its probable decline in numbers is the increasing competition it faces from the Blackheaded munia *Lonchura malacca* in the wild.

Blackheaded munia *(Lonchura malacca)*

The species is a relative newcomer to the Northern Indian bird trade as became apparent during the course of the survey. However, its number in trade has dramatically increased in the last five years to an extent that it was the second most common species in the trade during the present study (see Table VI). Blackheaded munias were seen in 41 localities (63%) making it contribute 17.59% of Northern bird trade.During the surveys, it was noted that the species was kept in only small numbers. It was normally observed that bird keepers generally kept only a couple of pairs, mixed with Red munias.

The recent preponderance of the species in the bird trade is probably due to its range extensions. Earlier, the bird was distributed throughout peninsular and eastern India and in the north west to Jagadhiri (Ali and Ripley 1983). However, in recent years its western limit seems to have spread to include a larger chunk of Northern India, and the southern white-bellied form is also

thought to be increasingly colonizing areas in the north. Captures in the north account for only 50% of the brown-bellied form (*L. m. atricapilla)* while in the south almost all the birds caught are presumably the white bellied form *(L. m. malacca).*

In the late 1980's and early 1990's the bird used to be brought to northern markets mainly from southern cities, in particular Bangalore and Madras. However, the occurrence of the Blackheaded munia in Northern India has now caused a shift in the trade route. Most birds in the northern markets are now caught from Uttar Pradesh and Bihar. The bird despite its non-musical ability is a great favourite with traders due to a variety of reasons. Firstly, the bird can feed on paddy and millet in addition to bird seed which is a great advantage especially to itinerant peddlers with an infrequent access to larger bird markets. Secondly, the adult bird can be displayed throughout the year as it does not change colour like the Red munia. This gives the trader a non-perishable commodity advantage. Thirdly, the bird is a hardy specimen and unlike Red munias can withstand the pressures of transportation and peddling. The bird also seems to display lesser stress and does not bang against wire meshes, therefore there are fewer deaths during transportation and peddling. Juveniles are mostly used for release ceremonies while the adults are used in the avicultural trade. Like the Red munias, the Blackheaded munia too is often dyed by traders. In this species, the adult brown-bellied form is generally untouched while the white bellied form and juveniles of the brown-bellied form were observed to be coloured. Normally the birds are dyed orange, yellow and green by using vegetable dyes. The bird is very susceptible to a cholera-like disease which causes very high mortality in captivity, as one infected bird transmits it very quickly to the entire stock.

Whitethroated munia or Whitethroated silverbill *(Lonchura malabarica)*

The Whitethroated munia, in contrast to the Blackheaded munia, has noticeably declined in numbers in the trade. At one time, one of the most commonly encountered birds in the trade it is now becoming rarer. Upon questioning, trappers claim that the bird is the easiest to trap and is sold easily because of its affordability. Even to this day the bird is sold at primary levels for barely 50-75 paise. Apart from this, the bird can easily be recaught even if released in the same locality and is therefore one of 'naive' species in trapper terminology. The bird can be tamed very easily and adapts to its largely varied grainivorous diet within 10-15 minutes of trapping unlike many other sensitive species. The bird is also easily transported and is quite hardy with a low rate of mortality. The bird breeds throughout the year across the country and therefore spends a larger percentage of its yearly time ratio on the ground foraging. It can therefore be easily lured to ground nets using food as a bait. The trappers also attribute the decline in numbers of this bird in trade to the general fall in Whitethroated munia populations around some traditional trapping areas due to unknown pressures. Apart from this, habitat (land interspersed with sparse vegetation) loss also possibly accounts for declining numbers.

A total of 1963 munias were recorded in 35 localities surveyed i.e. 54% of the localities. The bird however accounted for only 3.1% of Northern Indian bird trade. Whitethroated munia is trapped throughout its range of occurrence using baiting and camouflage net methods. Unlike the Red munia and the Blackheaded munia, the bird cannot be caught by funnel net method as it does not have a habit of roosting in large flocks. The bird is therefore captured mainly during the foraging period. The species is also caught by bird keepers using automatic bird trapping cages. These cages in fact were originally designed for this bird as even wild birds can be attracted to the cage. This is unlike the few other species caught by automatic bird cages such as the Red munia that relies on released birds being attracted to the trap.

The bird is also unique in that most of the trade comprises of dyed specimens and in fact the Whitethroated munia is seldom sold in its natural form as it has a drab appearance. The species is mostly dyed yellow and is often passed off as females or juveniles of the Red munia and Zebra finches (*Taeniopygia guttata*) family. The bird is normally sold a week or ten days after dyeing so that the colour has faded or washed away on the beaks and legs giving the bird an authentic 'natural' look. The plumage however retains the dye till its next moult giving the munia a rather exotic look. However, it's been observed that some of the dyes used affect the bird adversely. The chemicals present in the common green dye used in Northern India for example causes temporary blindness in the bird although such a reaction is not known with other colour dyes. The chemical composition of the green dye has however not been determined to date.

The Whitethroated munia is also one of the favoured species for bird releases causing minor population influxes into market or city areas. The species is known to have bred in captivity although not prolifically.

Spotted munia or Scaly breasted munia (*Lonchura punctulata*)

The Spotted munia or 'doctor bird', as it is popularly referred to is the fourth most common species in North India's bird trade. Four thousand eight hundred and seventy four munias were seen during the survey in 41 out of 65 (63%) localities contributing 7.68% of the trade.

The bird gets its trade name from the sales hype that it has miraculous curative powers and if mingled with other birds can prevent their illness. Hence many in the trade often feel it is prudent to keep a few Spotted munias with other munias. The bird is trapped by the favourite munia trap or the funnel net method when roosting in *Typha* stands or sugarcane fields during summer while the juveniles are caught by placing baits during winter. The bird is locally abundant and roosts in hundreds, therefore proving very easy to catch. So much so that very often trappers release several birds just after capture as they don't have enough space to accommodate them. The species comes cheap, fetching a mere 75 paise per bird at the primary stage. The bird is normally trapped in the rainy season. Once acclimatized the spotted munia is quite hardy although acclimatizing has to be done by covering the cages on the first day after capture.

Green munia or avadavat (*Estrilda formosa*)

Nearly 1000 green munias were observed in 6 localities during the survey, ranking it among the 20 most prevalent species in the Northern Indian bird trade. Its trade is very localized. The green munia is " an endemic species, resident very locally and unevenly distributed; on the whole rather scarce" (Ali and Ripley 1983). In the trade its rarity is one of the reasons for its high acceptability levels and preference. The species is one of the most sought after cage birds both for the domestic and international markets. The bird is not shy and spends a large portion of its time on the ground or on bushes, flying only when disturbed. They are therefore easily caught during the day using ground camouflage net. The net is occasionally baited but this is not always necessary as the bird is found in small localized groups and not in very large flocks like other munias. The species can also be caught with the funnel net during the day due to its unwary nature. The bird is sold for anything between Rs. 10-30 at the trapper's level.

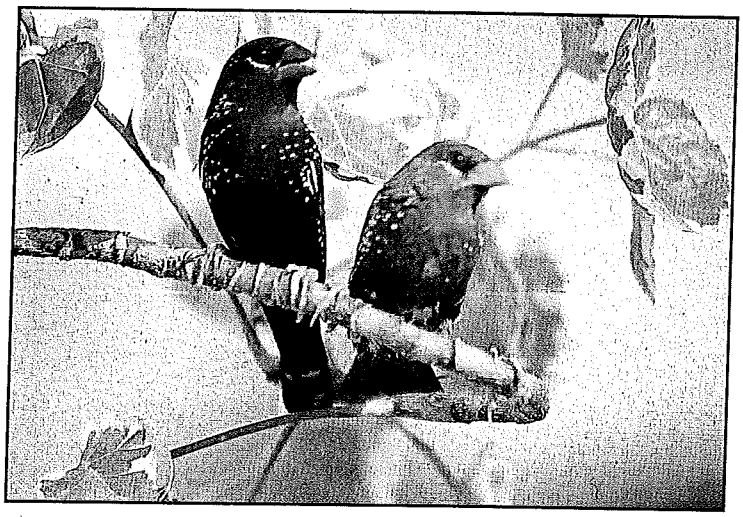
Although Ali and Ripley (1983) describe that the bird is distributed all over Central India, from southern Visakapatnam to northern Lucknow, trappers say that it is increasingly becoming rarer in many areas including Jhansi, Lucknow, Mt. Abu and Gwalior.

The bird is best kept as pairs as there is a tendency towards intra-specific fights with dominant individuals pecking others, leading to baldness around the neck and head regions. Traders who stock large numbers may keep them together for a month or two but otherwise tend to mix it with Red munia so that the intra-specific fights are minimised. As the green munia has a red beak and eye, it is easy for the trader to colour the female Red munia with a light green dye and pass it off as Green munia. During the period when exports were allowed, traders with Red munia permits used to smuggle out Green munias saying that these were dyed Red munia. This practice has in fact led to the trade name of this species which is *hara lal* or green-red. The species needs great care and is susceptible to stress. During the surveys it was observed that there were very high mortalities especially during the first few days of capture.

Whitebacked munia or White-rumped munia (*Lonchura striata*)

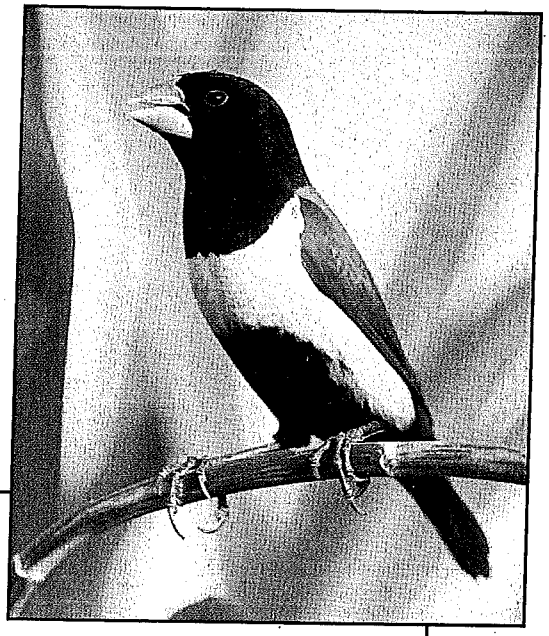
Although the Whitebacked munia was not noted in the current survey, it is sometimes seen in the trade. Before 1991, the species was widely traded, especially for export. This was because the wild bird was used as a substitute for a domesticated munia called the Bengalese finch (*Lonchura striata* var. *domestica*). The wild bird is cheaper than the domesticated one and also available in large numbers, hence the substitution. The original Bengalese finch in the trade is bred from Sharp-tailed munia (*Lonchura striata acuticauda*) and the Whitebacked munia (*Lonchura striata*) (Alderton 1993). The Whitebacked munia has a sweet call and many colour mutations of the domesticated variety are sold for up to Rs. 200-300 a pair in the retail market. At the time of open export the wild birds used to be obtained or routed from Bihar and West Bengal.

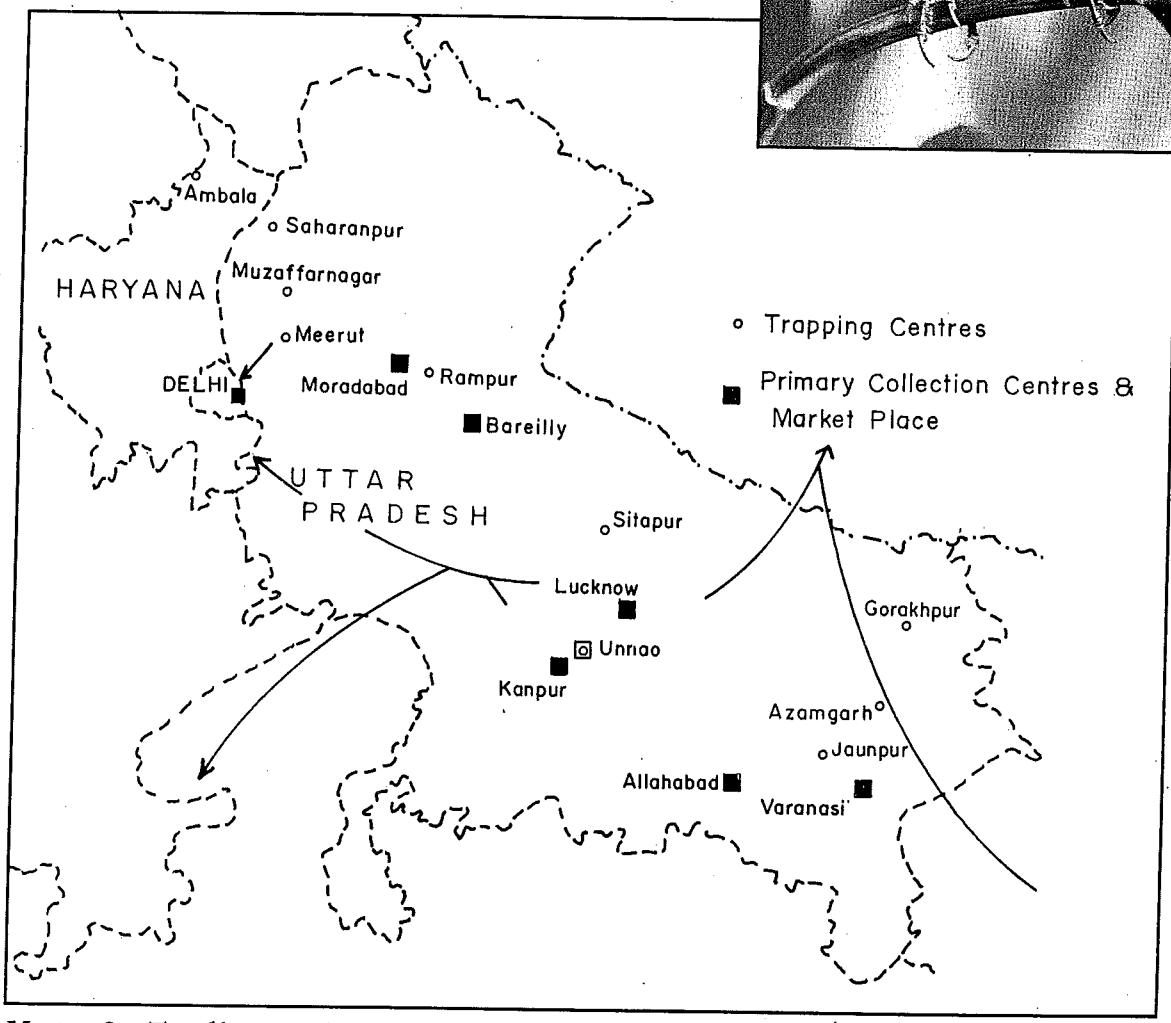
MUNIAS



Red munia males in breeding plumage is one of the most sought after cage bird in international bird trade.
Pix : Abrar Ahmed

Blackheaded munia forms the bulk of the munia trade.
Pix : Abrar Ahmed



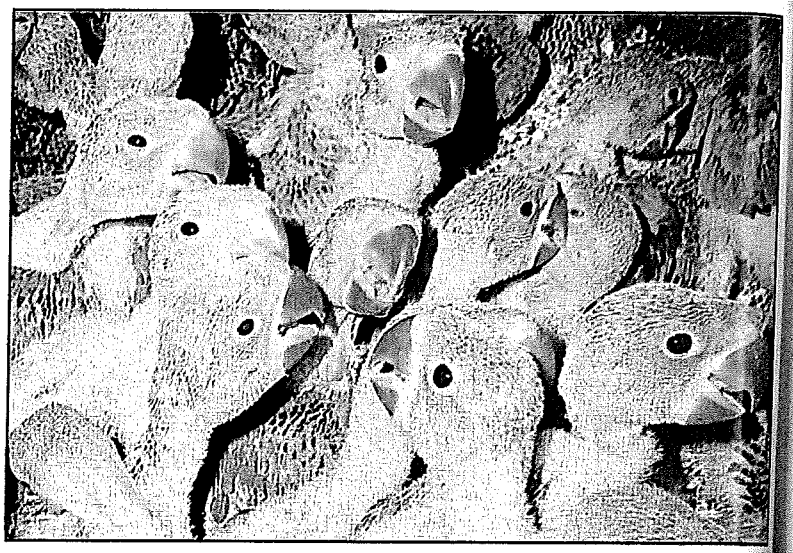


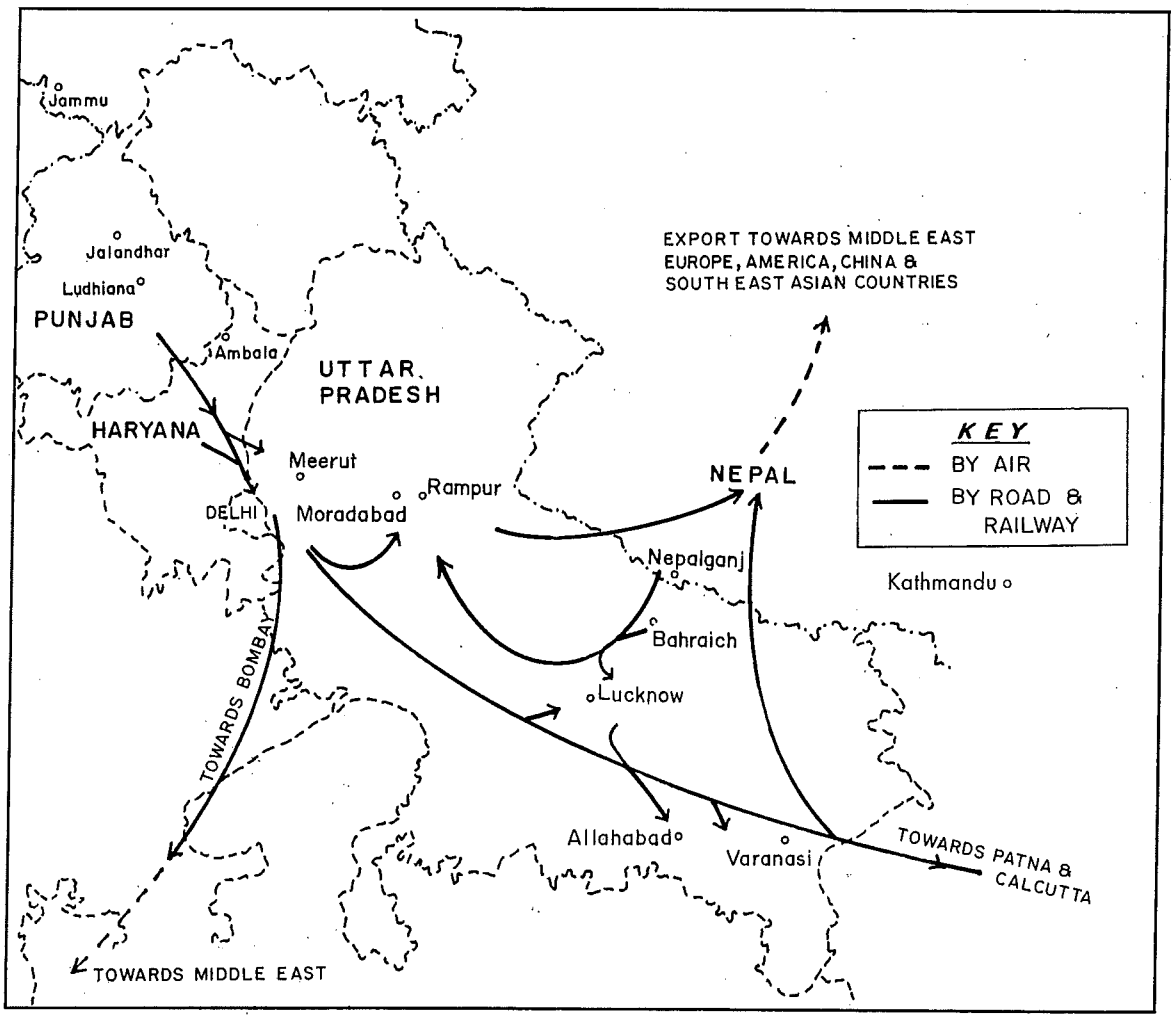
Map : 2 **Trading and trapping centres of munias.**

PARAKEETS

Alexandrine parakeets seized during a raid: *The seizure ended up being a death wish, as no Indian zoo has the facility to nurse young chicks.* **Pix : Abrar Ahmed**

Young chicks of two to three weeks are preferred by the buyers due to their ability to learn and mimic human voices.





Map : 3 **Trade routes of Alexandrine parakeets.**

Parakeets

Throughout the world, psittacines are a favourite cage species and India is no exception. Owing to their showy colours and talking abilities, parakeets have always figured prominently in the Indian bird trade. Although more number of munias are present in trade parakeets are definitely more in demand. However, as people normally keep single or pairs of parakeets in comparison to small flocks of munias, their numbers tend to be lesser than the munias in the trade. During the current survey, six species of parakeets and one species of lorikeet were recorded. While the parakeets comprised of *Psittacula krameri, P. eupatria, P. alexandri, P. cyanocephala, P. columboides* and *P. himalayana,* the lorikeet was *Loriculus vernalis.* Parakeets are mostly kept in cages and very rarely in aviaries. The latter method is mostly used by 'experienced aviculturists for breeding mutated forms.

Roseringed parakeets (*Psittacula krameri)*

This is the most common bird in the trade followed by the Large Indian parakeet (*P. eupatria).* Parakeets appear in the trade in both adult and chick forms. While nearly 80% of the trade is in adult birds, the remaining 20% consists of chicks which are mostly 2-3 weeks old. Almost all parakeets show marked sexual dimorphism and the males are preferred by the trade for their colours and markings. There is also a prevalent belief in Northern India that male parakeets talk better than females although this is not scientifically verified. Due to this belief, a male fetches a higher price than a female. Parakeets can live from 15-20 years in captivity making it one of the longest living birds in cages. Although wild birds have a steady market, mutations (wild and domestic) such as olive, blue, white, yellow (lotino and black-eye), grey etc were also noticed during the survey. These mutations can cost up to a whopping sum of Rs. 20,000 per bird in the domestic markets.

An important trade observation in Lucknow was that various methods were used by traders to sell the parakeets to potential customers as tame birds. This included debeaking by rubbing the tip of the beak on rough gravel, trimming of flight feathers and curling (perming) of tail feathers, and nearly dislocation of mandibles to show that the parrot does not bite.

The Indian custom does not normally involve keeping parakeets on rings or in chains but promotes a close human bonding with the bird. This is sometimes demonstrated by traders who make the parakeet touch its beak with the trader's lip, a feat possible only if the parakeet has been debeaked or hand-reared. The tail feathers are permed to make the bird look beautiful, a trade practice that was hitherto unknown. The birds that have been debeaked or otherwise manhandled to prevent them from biting are fed orally while they are in the traders' care. These birds are naturally unable to eat grain without the bird keeper and die soon after. This increases the mortality in captivity.

It was observed that peddlers would buy 200-400 parakeets at a time from larger dealers or trappers and hawk them taking about 30-40 parakeets

with them at a time. Peddlers are unable to take as much care of the birds as main dealers since their itinerant ways make it difficult for them to feed the birds at regular intervals and ensure less stress. The peddlers also belong to a lower economic strata as compared to dealers, thereby making it difficult for them to look after the welfare of the birds. Therefore, birds at this stage tend to become weak and susceptible to disease. Peddlers, for whom the birds are a commodity, hawk off the sick and weak birds first thereby reducing their losses. However, these birds do not survive for long in the hands of the buyer as they are already weak or malnutritioned. This contributes to the mortality of birds in the first few days after sale.

During the survey, it was also observed that most itinerant peddlers did not provide either water or food to the birds during their day long sojourns. These trips are erratic and are based on immediate monetary needs or on local market days. Peddlers also often give wrong information on the diet of the bird to prospective customers in order to increase their sales. For instance, customers who would otherwise be hesitant to buy a bird with a specialized diet like millet or paddy can easily be conned into purchasing it, if told that the bird would feed on unleavened bread or milk or pulses. To reinforce the belief that a wild bird would readily accept easily available food, the seller sometimes displays his own pet parakeet eating these very food. What is not disclosed, however, is that this bird is a hand-reared one accustomed to eating such food unlike the wild one which is being sold.

Apart from the mortality due to wrong diet, parakeets also die soon after the sale due to injuries caused by stress and repeated buffets against the cage. This again is a feature that the customer sees only after bringing the parakeet home since the traders keep them together in small flocks. Parakeets even when freshly caught do not indulge greatly in cage buffeting if put with other parakeets. However, solitariness induces this captivity-related stress. Parakeets also face the problem of being considered a substitute toy. Although most other birds will be bought only by bird fanciers or keepers in bird markets, the universal popularity of the parakeet and its easy availability causes this species to be bought by a very large segment of the society. Many of these buyers are quite ignorant about welfare measures for birds and merely buy it to appease insistent children. The bird is cared for only for the few hours that it provides entertainment and then is neglected causing high mortality. Sometimes healthy birds free themselves by breaking the weak hawking cages.

These days the parakeet is caught year round. Traditionally February to April were taboo months as they coincided with the breeding period of the bird. While adults were collected till February, chicks would be collected only after April. However, the boom in exports, which peaked in India in the sixties to eightees, have made trappers deviate from traditional practices. The current export ban has not caused any change in this year round capture phenomenon or regime. Trapping during the breeding season also goes up because of the twin reason of temporary rarity and easy capture of single birds or pairs. As

birds pair during this season, and do not roost communally, traditional nets do not work. However, birds come down both for hole-nesting and for feeding on the various undergrowth and trees such as *Zizyphus* and *Morus* that fruit during the period.

Chicks are collected from March to May. They are fed gram pulse and wheat flour in tablet form. They are either hand fed or orally fed by the trader. Sometimes they may even be forcefully fed with the help of plastic bottles of the kind used for dropping oil into machines.

Alexandrine parakeet (*Psittacula eupatria*)

This is the most preferred parakeet in most parts of India. The bird is known by several vernacular names in Northern India such as *Pahari tota* and *Hiraman tota* in Uttar Pradesh, *Noori tota* and *Rai tota* in Punjab, *Mansarya tota* in Jammu and *Gagruni* and *Hiraman tota* in Rajasthan. The species is considered second only to the Hill myna in its ability to mimic by the trade. The alluring red shoulder patch, red ring and comparitive large size contributes to its aesthetic appeal. The bird used to fetch up to 20-40 dollars per individual when exported legally and thus is ranked among the more expensive Indian birds in the international market.

In Northern India, chicks are collected from March to May. However, chicks from eastern and north-eastern India enter the Northern Indian trade from December onwards. These chicks show very high mortality as they come to the cold northern winter. This is substantiated by the very low prices offered to Northern Indian dealers by eastern Indian suppliers. While the chick in season could cost up to Rs. 125 in intra-dealer transactions, the eastern Indian chicks can be bought for as low a price as Rs. 30-40 at this time by dealers who wish to sell off their stock. In contrast when the 'eastern season' ends by February end, Northern Indian chicks are sent to supplement dwindling eastern stocks. These chicks show low mortality as the climate is more favourable then.

Birds from the three states of Haryana, Punjab and Jammu & Kashmir account for the majority of Alexandrine parakeet found in the trade. In Haryana, the birds are trapped in Ambala and Jagadhiri while in Jammu & Kashmir they are trapped mainly from Jammu and its surrounding areas. The much valued talking and docile birds from Punjab come from Jullundhur, Ludhiana, Amritsar and Hoshiarpur districts of the state. The birds are also trapped in Dehradun and Haridwar in Uttar Pradesh and from the north west state of Rajasthan. Birds from the lower regions of Nepal also come into Uttar Pradesh and mingle with the Indian stock. The parakeet caught from the remaining parts of its geographic range is not very significant in terms of number.

Within India, the parakeets are transported by rail or bus. As *P. eupatris* has a short massive, deeply hooked red bill, the birds are transported in strong wire mesh cages with two or three folding shelves. This eliminates damage by the bird to the cage and fellow inmates. To avoid fights among individuals in some stocks of this bird, their heads are covered with cotton cloth caps. Three tiered folding cages (each tier measuring 4 inches in height) are used for

transportation since the low height of the cages prevent the birds from moving their heads upward and thus prevent them from fighting.

It is very easy to transport *P. eupatria* obtained from Punjab as they are less vocal and pugnacious in captivity. Young chicks are generally accompanied by a trader during transportation as they have to be fed at least twice a day. Juveniles which are over two months need not be accompanied as they are required to be force-fed only once in two days since they have learnt to feed on their own.

All the Alexandrine parakeets caught in the hills of Uttar Pradesh upto the Nepal border are sent to Lucknow which is a staging point. From Lucknow they are sent to Varanasi, Bihar and West Bengal. All the birds from Northern India (Punjab, Haryana, Jammu etc) are collected in Jammu, Ambala and Ludhiana from where they are sent to other parts of the country.

The dealers generally feed the Alexendrine parakeets millet, corn, paddy and groundnut. Rarely are the birds fed fruit. Gourds or other fruit are used to feed the bird on the first day of captivity and then gradually replaced with grain. The young chicks are fed crushed soaked gram mixed with wheat flour or just plain wheat flour in a tablet form. Chicks which are less than 15-20 days old are given a wheat flour solution through a dropper or they are force-fed orally. Chicks from Bihar and West Bengal are fed boiled rice. A trade observation which has not yet been scientifically verified is that birds adapted to a millet diet are the hardiest in captivity as compared to other stocks, while the paddy adapted individuals show highest mortality.

From the trapping sites in Punjab and parts of Uttar Pradesh, the adult birds are purchased for anything between Rs. 35-40 by the sub-dealers who then sell the birds to dealers in Ambala and Ludhiana. The stock is collected here and then sent to markets in Lucknow, Moradabad, Rampur, Meerut, Kanpur, Bombay and Delhi where the price ranges between Rs. 70-150 depending on the demand.

By all accounts price fluctuates from region to region. The chicks of Alexandrine parakeets are mostly purchased by Jullundhur, Ludhiana and Ambala middlemen for about Rs. 40-50 and from thence they are sent to Bombay, Delhi and Moradabad. The middlemen sells the bird for Rs. 80-120.

In Calcutta the chicks are obtained from Orissa and Bihar for Rs. 50-60 and from Ludhiana for Rs. 100. The stock reaching Delhi is sold in Jama Masjid market for a retail price of Rs. 150-300. In Bombay and Calcutta *P. eupatria* is sold for Rs. 200-400.

Blossomheaded parakeet or Plum-headed parakeet (*Psittacula cyanocephala*)

This parakeet is favoured by the trade because of its seven-coloured appearance. The colours range from green on the body, red and purple on the head, white on the tail tip, black on the neck, yellow on the beak to blue on the

tail. During the surveys conducted for the study, 2940 birds were seen in 43 markets comprising 66% of the markets surveyed. The bird was ranked sixth by volume in the Northern Indian surveys. Despite its popularity, the bird shows higher mortalities than other parakeets in captivity because of its belligerent nature. The birds have inter-individuals fights that result in injuries to either the head and neck region or the feet causing high mortalities. There is a popular saying among traders that the bird causes regret to those who buy and to those who do not — an unenviable proposition to say the least. The mortality is greater during high-stress periods e.g. when being transported. This can be reduced by two methods : either the species is transported mixed with non-pugnacious Rose-ringed parakeet or by transporting them in low-height cages which are about 10-12 cm in height. These cages can be covered with a black cloth to minimize stress. These are better than methods such as covering head of every individual with cloth. This is mainly because the latter method involves a lot of manpower and also as they cannot undergo a long journey due to their inability to feed on the way. Another popular method used by the trade is to stuff the cages used for transporting Plum-headeds with green leaves. Apart from darkening the cages, the leaves provide a substitute for the birds to vent their anger on! During the time that exports were legal, importers of the species used to complain of high mortalities even after reaching them. This was somewhat reduced by darkening the aviaries and by scattering the feed throughout the cage.

The Plum-headed or Blossomhead parakeet is either caught by using clap traps, hanging nets or by the latex method in which decoy call birds are used or by hanging nets. In all the trapping areas surveyed, trappers were found to have eight to ten decoy birds which they keep year round. The birds are fed millet and paddy. Interestingly, Blossomheaded parakeets mostly enter the trade as adults and not as chicks. This is probably due to two reasons: the unaesthetic dirty-yellow beak of the chick and the fact that their care and upkeep in its chick stage is very difficult.

Slatyheaded parakeet *(Psittacula himalayana)*

Three hundred and ninety nine individuals were seen in 11 surveys at a percentage frequency of 17%. The Eastern slatyheaded parakeet *Psittacula finschii* was not recorded in the Northern Indian trade at all except one specimen. The parakeet shows very high mortality. Very like the Blossomheaded parakeet, the Slatyheaded too is rebellious by nature and causes a great deal of problems where transportation and welfare are concerned. During transportation, the bird's cage is stuffed with paddy husk and then wrapped in voluminous blankets or other clothes so that light does not penetrate inside. The species has a tendency to crowd each other in captivity leading to excessive body heat. It also reacts adversely to handling and gets stressed if touched. They are mostly caught in The Himalayan foothills and Kumoan hills for the Northern Indian bird trade in the months of December and January. The trade in the species consists mostly of adult birds and the juveniles which are considered even more pugnacious than the adults are released soon after capture or as soon as they are brought into

markets. When export was legal, they were exported in the winter season but after the ban the demand for the species plummeted and is now mostly restricted to Calcutta, Patna and Bombay. Delhi and Rajasthan too receive a few birds. It's noticed that the males of this species are often mixed with the males of Blossomheaded. This is because the trader records better sales if the customer can be fooled into thinking that the Blossom headed is the female of the Slatyheaded.

Red-breasted parakeet (*Psittacula alexandri)*

This species is mostly caught in North-Eastern India and occasionaly near Mussoorie and Kumaon hills in the winters. Therefore this species is more of an eastern bird in the trade. Nevertheless 139 birds were spotted in 13 surveys at a frequency observation of 20%. Although the species was in great demand when exports were permitted, they have become rare in the Northern Indian trade now. The few birds that are supplied in this area usually come from Bihar and West Bengal. The parakeet shows mortality in the first few days of captivity but once acclimatized it is one of the hardiest species in captivity. Very often the bird is retailed in local bird markets as an exotic species, the Moustached Parakeet. The chicks are mostly sold in May and June and form a large percentage of the trade in the north-east. In the northern trade however adult birds are preferred. The bird was rarely sighted in private collections due to their unavailability and high prices (a chick can cost upto Rs. 200-400). Traders usually keep the birds in thick wire meshed cages as they have a sharp bite and can cause more damage to the cage than most other parakeets.

In the trade, the bird's diet consists of paddy, gram and pulse. Ali and Ripley (1983) record the diet of the species as being wild figs of *Ficus* species and other wild and orchard fruits, leaf buds and fleshy petals and nectar of *Salmalia, Butea* and similar flowers; hill paddy and maize. The improper diet while in captivity is possibly a reason for high mortalities of the bird in trade.

Indian lorikeet or Vernal hanging parrot *(Loriculus vernaculus)*

The species is very rarely seen in the Northern Indian bird trade. During the current survey the species was spotted only once when 35 birds were found in a Delhi market. This consignment had come from the southern Indian town of Bangalore. Most of these birds died within three to four days of the investigator visiting the market thus underscoring the fact that the species has a very highy mortality rate in the trade. It was evident that these birds were caught by the latex method as many had missing feathers.

In the trade the lorikeet is fed a mixture of fruit, milk, boiled rice and Farex (a brand of milk based food for infants). The bird also has a high mortality due to their agglutinated condition as they are messy eaters in captivity. Some traders give these birds nectar which is the most preferred diet of the lorikeet. The birds fetch anything between Rs. 400-500 a pair and are often passed off as

species of love-birds (Abyssinian love-birds) which are more expensive and preferred.

Bluewinged parakeet or Malabar parakeet (*Psittacula columboides*)

The Bluewinged parakeet is another southern Indian species, exported in very large numbers when trade was legal, but which has since declined in the Northern Indian bird trade. During the current survey only four individuals were seen. There were reports of 30 odd birds in Allahabad, which like the lorikeet, had also been obtained from Bangalore. While in trade, the bird's diet is millet, jowar, paddy and fruit. These birds are sold in pairs and a couple can fetch anywhere between Rs. 800-1000.

Softbills

Softbills refer to those species which are insectivorous, frugivorous or nectar-feeders. As they are not graminivorous, they do not have the hard, nut-cracking and seed eating bills of other birds and thus have gained the apt name of soft-bills. These are mostly hill birds and are in great demand among specialized aviculturists throughout the world. Some of the softbill species found in India are myna, Chloropsis, Shama, Pekin robin (Red-billed leothrix), Red-whiskered bulbul, thrushes, redstarts, tits, magpies and jays. Softbill species are generally very attractive to look at with conspicuous colourations. They are also excellent songsters making them preferred cage-birds. In Northern India, softbills are normally caught in the areas of Pithoragarh, Almora, Nainital and Kotdwar in Uttar Pradesh and parts of Bihar. The most common way of catching softbills in the hills is by using the Jungle owlet (*Glaucidium radiatum*) as a decoy. The trapper first expends his energy catching the owlet, using mice as bait. Once it is caught, the owl's eyelids are stitched so that it cannot see and it is then made to sit on a perch. It is fed well so that it is sluggish and sits almost immobile on its perch. This species is more preferred over the Barred owlet *(Glaucidium cuculoides)* and Spotted owlet (*Athene brama).* Although the reason for such a preference is not scientifically ascertained, trappers say they favour using this bird since it is more nocturnal than the other species and is also more conspicuous thanks to its rufous primaries. The theory behind using an owl decoy for catching birds in the hills is that birds perch normally on tall vegetation and cannot be reached easily by conventional rods (which are 10-15 metres long) or be caught by nets. Hill birds are normally shy, arboreal and found in dense thickets. As most birds in the hills are not graminivorous and therefore are loath to come down to the ground in large flocks, nets are not used here. Moreover the mountainous terrain makes it difficult to search and trap birds, thus ruling out the use of funnel nets whereby the birds are driven into the nets. Using the owl to trap hill birds is also necessary since these creatures are very shy of human beings compared to their winged friends in the plains. Given the inaccessibility of the birds on the high perches, the trappers have to rely on decoy birds to bring the birds to a trappable level.

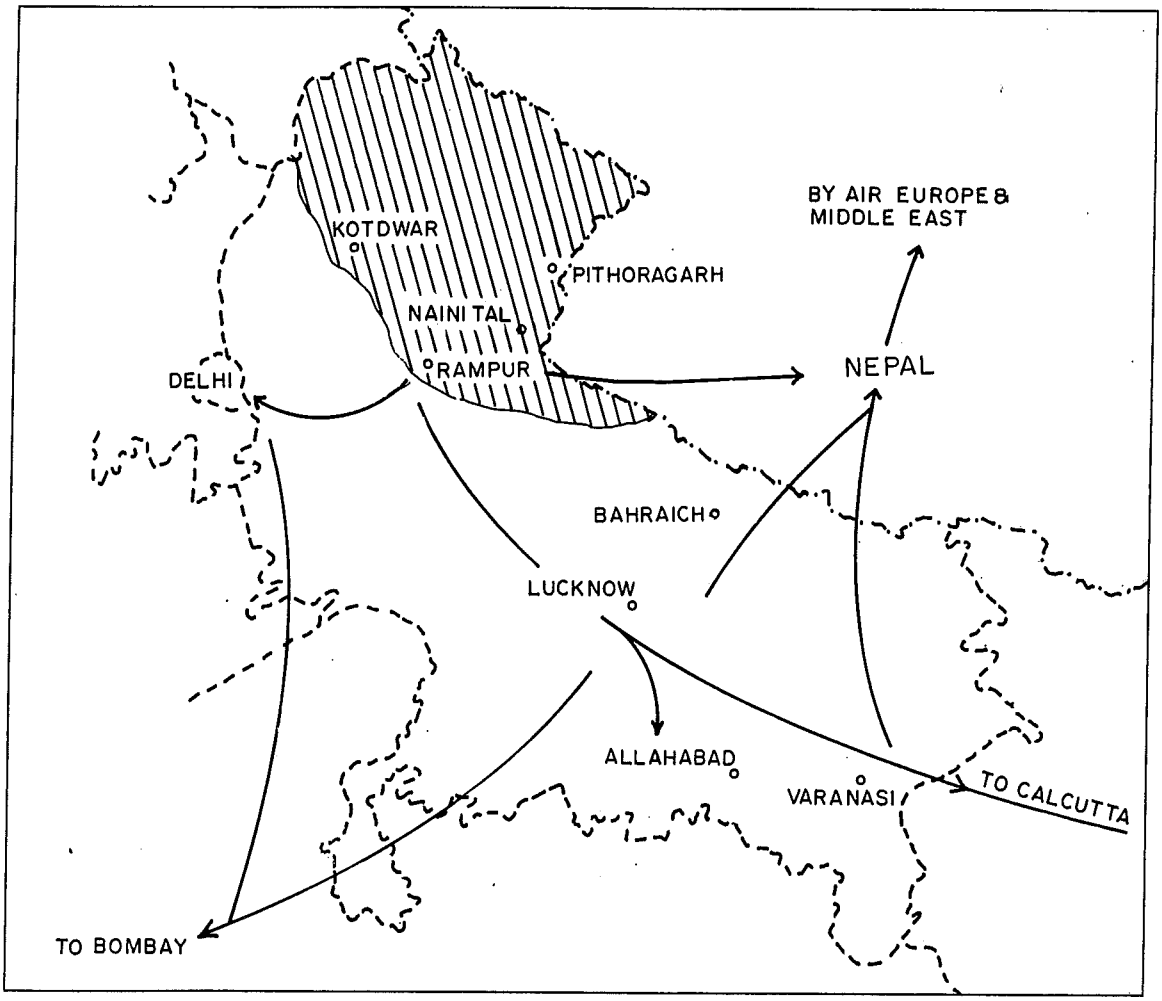
The other important tool for the hill trapper is a shield of leaves that he uses as camouflage. The leaves are strung around an oval-shaped frame that is made by bending mulberry stems or cane. The trapper hides behind this structure peeping out through the two holes left for the eyes. Trappers are proficient in remaining immobile for long periods.

Using decoys to catch birds is a very specialized art. When a trapper spots a flock of preferred species such as White-eyes, tits, sunbirds etc, he displays the decoy owl and hiding behind his shield of leaves makes distress calls of the species that he wishes to trap. Wild birds attracted by these calls come closer to investigate and presume that it is the owl which is the cause for the alarm and prepare to mob it. This is when the trapper uses his *glue* or Lime stick and catches the birds.

Other preferred decoy species are the Grey tit (*Parus major*) and Yellow-cheeked tit (*Parus xanthogenys).* These are very vocal when caught and can be tied near the decoy owl causing them to cry out loudly and for a long period, thus attracting bulbuls, thrushes, sunbirds etc. Some birds in fact are very good at attracting certain other species. For example the White-crested laughing thrush (*Garrulax leucolophus*) is useful in attracting Whitethroated laughing thrush (*Garrulax albogularis),* Himalayan tree pie (*Dendrocita formosae)* and Green magpie (*Cissa chinensis).* The latter in turn is good for catching Blue magpie (*Cissa erythrorhyncha*). Similarly the Common myna (*Acridotheres tristis*) is sometimes used to attract the Black throated jay (*Garrulax lanceolatus).*

For trapping sibias and chloropsis, the trapper uses a specific tree called *Churaa* or *churri* which has a nectar yielding inflorescence or the wild plantain species. Even though territorial under normal circumstances, these birds congregate on these species for nectar where they can then be caught with medium sized poles.

Streaked spiderhunters (*Arachnothera magna*) are also caught on wild plantains. The use of specific plant species to catch specific birds shows a great



Map 4 : *Trading and trapping centres of Hill birds.*

understanding of the habits of the birds by the trappers. For species such as White-capped redstart (*Chaimarrornis leucocephalus*), Plumbeous redstart (*Rhyacornis fuliginosus*), Blue whistling thrush (*Myiophonus caeruleus*) and Shama (*Copsychus malabaricus*), a different technique is adopted. Two pliable sticks are fashioned into arcs and then bound together at right angles forming a dome of sorts. This is coated with glue and a live bait (normally an insect) is tied to the centre of the dome. When the bird tries to take the bait, it gets stuck to the arms of the structure. Another method for catching gregarious species such as the Blue magpie or the White crested laughing thrush is to plant a large circle of glue coated twigs into the ground. Decoy birds such as a White crested laughing thrush and an owlet is tied in the middle of the circle and then teased to attract other passing birds. When thrushes or magpies come to mob the owl they get stuck to the rods. Birds can also be caught using territorial decoy birds to attract other territorial species or by using smaller birds as bait. For the latter normally warbler species are used and are strung up after plucking so that it resembles a tasty bait for species such as the Blue magpie.

As most of these birds are caught by the latex method, their feathers are bedraggled or lost and have to be kept for a month or so until new plumage permits sale. The birds are cleaned using kerosene oil and ash of cowdung so that all latex is removed. This needs very careful handling and as among the softbills most species are fragile, cleaning is a task needing lot of skill. This time is also useful in geting these birds to get accustomed to a new diet. Feeding of softbills is also a specialized task and the Northern Indian trade has devised its own welfare methods.

Insectivorous birds are fed on a diet of termites for the first few days. These are also the days when maximum mortality occurs. Termites are slowly replaced with minced meat mixed with gram flour. The composition of this mixture tends towards minced meat in the first few days and is slowly changed by adding more gram flour so that the birds are accustomed to a prepared vegetarian diet. This reduces the time and money needed to be spent by the dealer although this does affect the species in the long run. Insectivorous birds that are denied insect foods tend to show dull plumage and a loss of colours as also gastrointestinal problems due to the artificial diet. Frugivorous birds are somewhat more hardy and alongwith nectarivorous species like chloropsis and spiderhunter form a group that is not primarily dependent on insect food. However, these birds do take the occasional insect in varying degrees depending on the species unlike predominantly insectivorous birds which have almost no fruit or nectar in their diet.

Among softbills some of the most expensive birds are the Hunting cissas or the Green magpies *(Cissa chinensis)* which fetch up to Rs. 3000 a pair in the retail market. This species is unique in changing colour in captivity from a green colour to a blue. This is variously attributed to melanism and to direct exposure to sunlight by the Indian traders although no scientific verification has been done on the phenomenon. Another group of birds in the trade are the

sunbirds of which the Yellowbacked (*Aethopyga siparaja),* the Nepal yellowbacked (*Aethopyga nipalensis*) and the Purple sunbird (*Nectarinia asiatica)* are the most preferred. They are fed with a mixture of honey and sugar. However, this diet is not ideal as the sunbird normally has an insectivorous component in the wild. Due to this and their inherent territoriality, these birds show high mortality in the first few days of capture.

Among softbills, the most widely preferred group are the bulbuls. On certain festive occasions such as *Makar Sankranti*, some cities in Uttar Pradesh such as Kanpur have bulbul fights. The birds are made to sit on perches made of gold-plated and silver-plated metal. The bulbuls are trained by using a cotton thread tied to the waist which is then tied to a perch. The bird when trying to escape, hurts itself and therefore it struggles less. In this way the customer begins the training. They are also not fed at times to establish the reward-punishment routine and are often taken out into the streets to make them familiar with human beings. Normally only males are used for such fights.

Of the 8 species and subspecies of bulbuls recorded in the trade, the most noteworthy are the Redwhiskered bulbul *(Pycnonotus jocosus),* Redvented bulbul (*Pycnonotus cafer*), the White cheeked bulbul (*Pycnonotus leucogenys leucogenys)*, the Brown-eared bulbul (*Hypsispetes flavalus*), and the Blackheaded yellow bulbul (*Pycnonotus melanicterus flaviventrus).* The bulbuls are normally kept singly or in pairs and live for 2-3 years in captivity.

Among other hill birds in the trade are the Shama (*Copsychus malabaricus*), Rufous bellied niltava (*Muscicapa sundara*) and the White-capped redstart *(Chaimorrornis leucocephalus)* These birds are kept for their song and colour. Shamas are normally kept singly and occasionally in pairs. Juveniles of all these species are more common in trade and are more preferred. Tits used to be a species which were quite common in the trade although the ban has considerably lessened their number in the trade. Species such as the Grey tit (*Parus major*), the Greenbacked tit (*Parus monticolus*), the Yellowcheeked tit (*Parus xanthogenys*), and the Redheaded tit (*Aegithalos cocinnus*) were common in the trade before ban. Shrikes are also common in the trade as they are very good mimics. In fact, the common name for the shrike family is *Hazaar dastaan* or a thousand stories underlining the ability of the species to mimic various sounds. Other softbill species in trade include Chestnutbellied nuthatch (*Sitta castanea*), Blackcapped sibia (*Heterophasia capistrata*), Barthroated siva (*Minla strigula*), Redbilled leothrix or Pekin robin (*Leiothrix lutea),* Silver-eared mesia (*Leiothrix argentauris*), Blue-winged siva (*Minla cyanouroptera),* Plumbeous redstart (*Rhyacaurnis fuliginosus),* Blue whistling thrush (*Myiophonus caerulus),* Verditer flycatcher (*Muscicapa thalassina*), White-eye (*Zosterops palpebrosa),* and Greyheaded myna (*Sturnus malabaricus*).

Most of these softbill species were seen in bamboo cages and these cages were normally covered to prevent injury to the birds. These birds have a very high mortality as they are the least hardy among the traded species. On a visit

to a trapping site during the survey near Nainital in Uttar Pradesh, high mortality was seen in these birds. Of the 11 species caught during the trapping by the traders, 8 of them were softbills. Among these out of 26 Pekin robins and three Slatyheaded babblers caught, five Pekin robin and two babblers died within two days. To be kept in mind is the fact that this was the mortality during the first two days and the deaths that take place till the time it reaches the customer and afterwards are not taken into consideration. Traders during the survey indicated that customers come back year after year for the same species such as the Shama indicating a very high mortality of the birds that reach the customers. Similarly out of eleven *Parus major* caught during one field visit in Pithoragarh district of Uttar Pradesh, seven died by the evening of the first day itself at an astonishingly high percentage mortality of 82%. These figures however have to be viewed in the light of the conditions that prevail during the trapping period. Often trappers are unable to feed or give water to the birds while in the field and while trapping of other species is going on. This is normally within the first few days when additionally the bird is also suffering from the stress of being caught and hence there are large scale mortalities at this time. Once it reaches the plains, mortalities decrease with better care. Mortalities again shoot up once in the hands of customers as often the specialized conditions and dietary habits of softbills are not taken care of by the average Indian buyer. Also, mortalities are higher now that the ban on export of birds and their domestic sales is in place. Although the obvious reason would be that illegal trade increases stress on animals during transportation and holding due to the need to hide and camouflage them, there is another reason for the rising mortalities of the birds. This is due to the fact that when the trade was legal, all birds used to fetch a price and trappers used to be extra careful of any individual that they trapped. Now, however, trappers go in search of species that they have orders for or that they know will have a ready market. Other species become incidental catches and welfare suffers in the bargain.

Before transportation to the major markets of Bombay and Calcutta, the birds go through the staging points of Delhi, Varanasi, Lucknow, Patna and Rampur. There is enough evidence to suggest that these species which were once a European preserve are now being smuggled to Pakistan and Dubai. These countries obviously serve as entrepots before they are despatched to their final destination.

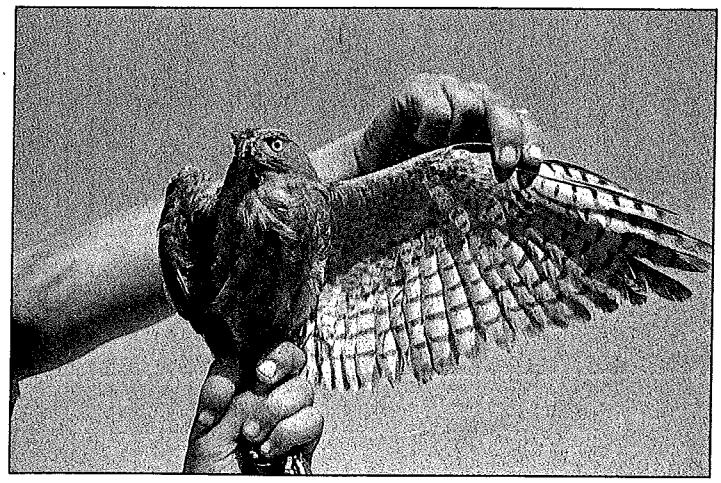
Raptors

During the surveys, it was observed that bird dealers considered raptors their prized possession, treating the species like a veritable treasure. The treatment is not surprising, considering the fact that this group of birds are the highest priced in the trade, raking in enormous profits to the sellers. Thirty nine individuals belonging to six species of raptors were spotted in 15 out of 65 markets surveyed in Northern India. The species that I frequently spotted in trade included the Shikra, Sparrow-hawk, Laggar falcon, Peregrine falcon, Kestral and Pariah-kite.

Although falcons command a whopping price, dealing in them is a risky business, since many of these species come under Schedule I of Wildlife (Protection) Act. Survey findings reveal that the trappers get the least benefit as their income from a trapped bird barely amounts to 5 to 15% of the retail or middlemen price. A falcon may sell for anything between Rs. 500 to 80,000 in India and middle east depending on the customer and the bird.

Raptors are not a general attraction for common bird fanciers or keepers and are usually only kept by falconers, who train and use these birds for hunting quarry like bustards, partridges and hares. In the domestic trade only a few knowledgeable customers are aware of the large raptor species such as the falcons and demand these. Otherwise the few odd customers who desire to buy raptors are satisfied with less prized common species like Shikra and Kestral (although Kestral is not used in falconry) or even a Pariah kite. Large falcon species such as the Peregrine, Shaheen and Laggar if seen or offered for sale during the surveys, were mainly the ones rejected for export. The main criteria for rejection is breakage in primaries, comparatively small size, old age or a male bird.

During the survey it was observed that the trading of raptors required a lot of knowledge among the dealers as all birds caught are not of the same price or value in international market which bring heavy loss to the primary dealers and the birds rendered non-commercial may be of no value.



Shikra being offered for sale in Varanasi bird bazar. The trader is showing the wing condition, an important criteria for bird selection. **Pix : Abrar Ahmed**

Trapping of raptors is done in most of the areas around the trappers settlements. An interesting trade finding is that a high percentage of raptors caught are accidental catches or lucky catches for the trappers. Study done on this aspect showed that about 150-200

trappers on an average go for trapping pigeons and other birds using clap trap. Mostly two or three decoy birds are tied in the net to lure the passing birds. Raptors in these areas are attracted to the tied decoy birds (mainly pigeons) and fall prey to the trapper. Most of the bird trade centres have hundreds of cage birds kept in the sun. Birds like Shikra are attracted to these places for an easy prey and are themselves caught. Once a Shikra is caught from an area it is soon replaced by a floating individual of the species which is also caught.

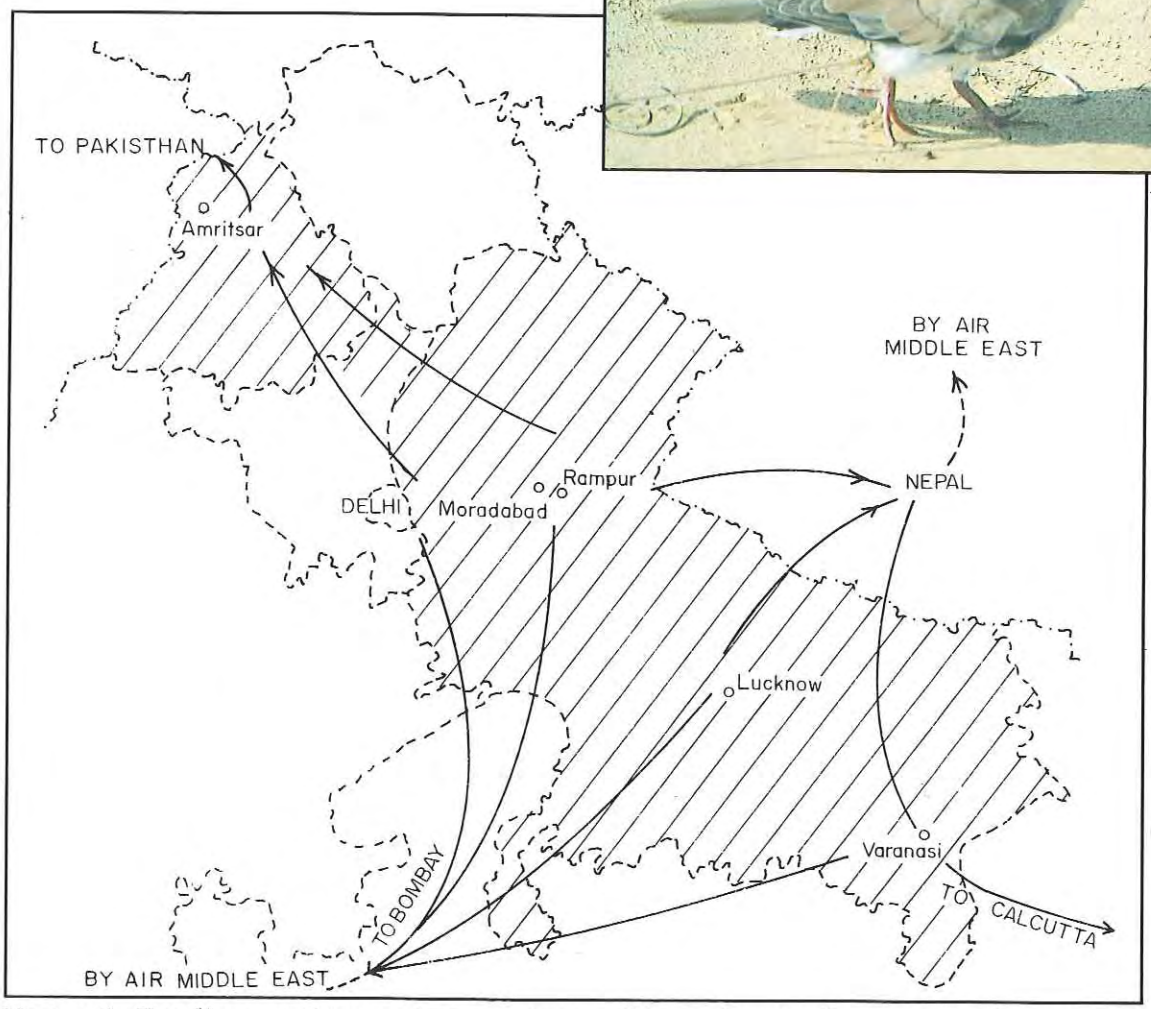
Apart from accidental catches, it was observed that a very low percentage of trappers exclusively go for trapping raptors. Some trappers from Moradabad and rural areas around Lucknow exclusively go for trapping falcons from October to December which is the peak season for the falcon trade. Trapped falcons are then at once sent to consuming countries especially the Middle East. The maximum prices for the caught birds are at the starting of the game season since all the raptors are used for falconry. Raptors caught at the end of winter are not much in demand as the transport and training period will take 15-20 days, by which time the hunting season would end.

The birds once caught are sold to middlemen finally reaching the sub-dealers. If caught by the latex method the bird feathers are cleaned with kerosene oil. The eye lids of the birds are stitched using special needles called "*poth ki suyi*" and Silken or cotton thread with a knot at one end. With the eyes stitched the bird is made to sit on a perch. After doing this, camphor is used for the second stage of training. Camphor given to the bird produces a calming effect causing drowsiness in the bird. The birds are sold or transported at this stage. Sometimes, they are transported with the eyelids stitched but without giving camphor. One of the most frequent transport method used is the concealment of raptors in baskets having false bottom containing 'Betel leaves' widely sent to Pakistan. The remaining field training is then done by the buyers themselves.

RAPTORS

Arab falconers with their prized possessions.
Pix : Asad R. Rahmani

A dove with nooses on its back used by falconers for capturing falcons.
Pix : Asad R. Rahmani



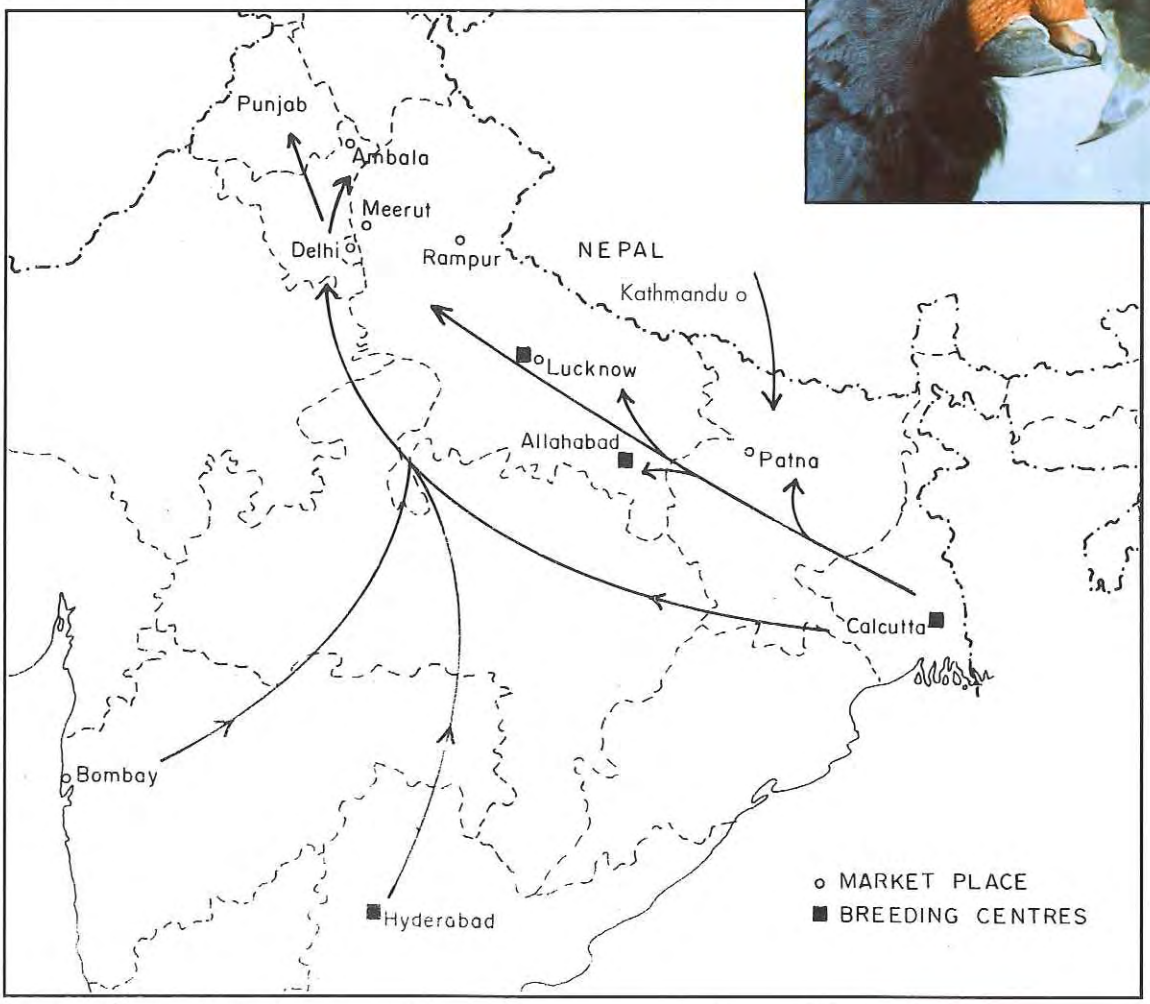
Map : 5 **Trading and trapping centres with major trade routes of raptors.**

EXOTICS

Blue and Gold macaw seized from the Indira Gandhi International Airport, Delhi and presently with Delhi Zoo. **Pix : Abrar Ahmed**

Black Palm cockatoo's are highly endangered by trade. A pair was seized at Indira Gandhi International Airport, Delhi.

Pix : TRAFFIC India



Map : 6 **Market places and breeding centres alongwith trade routes.**

Exotic species

During the live bird trade survey in Northern India, five groups of exotic birds were observed as being commonly sold along with the indigenous species. These were the Budgerigars, the Love birds, the Cockatiels, the Java sparrows and Zebra finches. Although the thrust of the survey was on Indian species and not on exotics, nevertheless 2545 budgerigars, 546 zebra finches and 419 love birds were recorded. Exotics were recorded in as many as 26 of the 65 markets surveyed during the period. Most of these came via dealers from Calcutta and Hyderabad, who bred them in captivity, although some may rarely have been imported from abroad to supplement Indian varieties. After the ban on trade of indigenous species, a large number of people have begun to keep exotic species as a front to deal with Indian species covertly. The continued preference for dealing in Indian species despite the customer's preference for the exotic and the novel is due to many reasons. To start with, the more expensive exotics need a larger investment by the traders in comparison to the wild Indian species. Secondly, in the case of wild birds, mortalities are easier to bear for the dealers than in the exotics where the money lost is high. Also, despite the buyer's preference for the exotic species, they end up buying more Indian birds as they are cheaper. Even the least expensive of the exotics i.e. the budgerigar or zebra finch is sold for Rs. 80 a pair, compared to Roseringed parakeets which fetches only Rs. 10-20.

Apart from these species several other exotics or domesticated birds find their way into the trade such as pigeons, doves, ducks, Golden pheasant, Silver pheasant etc. The newer varieties of Cockatiels, lovebirds etc enter the trade once in a way, boosting sales as most of the breeders would wish to possess the new varieties. Most species in the trade are bred in private homes and enter the trade via dealers and sub-dealers Birds are then collected and sent by train to various retailers who do most of the actual sale. Most amateur bird keepers and those who rear birds as a hobby prefer to keep exotics rather than wild ones but they too still buy a few wild Indian birds because of their competitive prices and easy availability.

During the current survey, some species of captive bred exotic species were observed to be infected with ornithosis. This infection is mostly attained at the time of transportation and primary retailing. In larger markets with higher turnovers, not much care is given to the treatment of infections. In fact the weak or infected birds are sold off first by the dealer. As the entire stock in such markets has the comparatively fast turnover rate of a week or two weeks, the trader suffers least loss if they pass off the weak birds rather than treating them. Although the import of wild stock of exotics has been a long standing business, the last three years or so has seen an increase in illegal imports into the country. This is more so since the ban on exports took effect in India and since the keeping of all wild Indian species became an offense in the early 1990's. Birds such as macaws, rosellas, cockatoos and grass parakeets constitute a large part of the imports of exotics in India. At times these species are also used as a cover for

the illegal trade in Indian wild species. The chances of breeding these birds in captivity and selling the chicks of these species has made the exotic bird business a speculative trade.

A peculiarity noticed in the captive bred exotics trade was the tendency of the trader to hoodwink the customer by selling him pairs of birds of the same sex. The breeder in a place like Calcutta would like to keep all good breeding females with himself to ensure maximum chances of a good future stock. Sick females alongwith males (the number of males are anyway higher biologically in these species) are sent onwards to the dealers in Delhi who pair them off and sell them to the customers. Buyers who get two males have only an option to return to the dealer to buy two more birds (this increases sales in Delhi). Even now he is unsure as to whether he has got two males and therefore there is a perennial increase in sales for the dealers. The breeders profit from the lack of knowledge of the average Indian buyer as his breeding stock is not depleted.

Three categories of exotic birds were noticed during the survey. The first being purely domesticated species such as Budgeriger, Love-birds, cockatiels, Bengalese finch, Java sparrow etc. which are bred in thousands all over the country. They have several colour mutations not found in the wild.

In the second type, both wild and captive bred individuals were noticed. This includes species such as Gouldian finch, rosealla, Cut-throat finch etc. of which wild birds may have been smuggled into our country. This also includes individuals which have been captive bred in India or abroad.

The last category includes purely wild caught birds which are short lived and difficult birds in captivity. Examples of these are whydah finches and softbill such as Sugarbird.

The first type undoubtedly proves to be an ideal substitute for the wild caught cage bird trade and have been recognized as pet-birds throughout the world. This can be compared to other commonly kept pets such as dogs and rabbits, a fact that not many of us know.

UTILIZATION PATTERNS

During the survey, it was observed that a majority of birds caught were for the pet, food or release trade or for exhibition in zoos. However, a small percentage were being caught for other purposes including medicinal, sorcery and sport.

Pet trade

Birds are one of the most popular pets for humans. Be they as mascots, status symbols or simply for aesthetic reasons, the common man buys and keeps birds at home. Parakeets, mynas and munias are among the most widely kept pet birds with parakeets definitely being the most preferred group according to the survey. Of the 64 surveys conducted, the Roseringed parakeet (*Psittacula krameri*) was found in 57 while the Large Indian parakeet (*Psittacula eupatria)* was observed during 52 surveys. The group owes its wide acceptance also due to the fact that people of all religions consider it a blessing to keep this bird. Unlike certain birds such as the owls which are considered by some religions to be a bad omen, the parakeet is accepted evenly by Hindus, Muslims, Christians and Sikhs without any religious prejudice. Traders when questioned revealed that this group also recorded the maximum sales turnover, thus topping the popularity charts in the pet trade. As no records were being kept of turnovers in the illegal trade and as the nature of the surveys did not necessarily necessitate a repeat visit to the same markets, this turnover could not be quantified. The pet trade normally prefers four to six week old chicks which are hand reared as they tend to be tame and also talkative. Only a very small percentage of such chicks survive, therefore ensuring that the annual demand for chicks never decreases.

Among talking birds, however, the Hill myna *(Gracula religiosa)* is perhaps the most preferred although it does not enter the trade in the numbers that parakeets do nor are they as widespread in their captive holdings as are parakeets. The bird has probably not reached the quantum of trade of parakeets both due to its specific diet (non-graminivorous) and due to its excessive droppings. The Hill myna however commands a greater price than the parakeet both in domestic and in international markets. For example in 1994 the Hill myna was selling at approximately three times the price of the Alexandrine parakeet. This is because of their superior mimicking abilities.

In fact, other Sturnidae species such as the Common myna (*Acridotheres tristis)*, Bank myna *(Acridotheres ginginianus)* and Pied myna (*Sturnus contra*) are often coloured with carbon and oil by the traders to give them the black, shiny appearance of the grackle. Sometimes the feathers of the supercilium are shaved off and then coloured orangish red to give them the unmistakable Hill myna appearance. This more often than not fools buyers, especially in the domestic market, but suspicious buyers are also assuaged by sprinkling water on the birds and showing that the colours do not run off. Being oil based, the colours do not dissolve with water although if the birds are investigated properly, the fraud can very easily be detected.

Apart from the parakeets and the mynas, munias are most often kept as pet birds. In sheer volume of capture they would in fact surpass many other species (See Table VI). The Red munia (*Estrilda amandava)* that is ranked third in the trade is kept for both its song and colour. It is mostly males that are kept and the females are used in the release trade. Sometimes one female is kept alongwith several males so that it induces the males to sing making the species a higher attraction for the buyer. For certain other song bird species e.g. the chloropsis (*Chloropsis* spp.), a mirror is affixed to the cage so that the bird sees its image and sings. Though the image is its own, the bird thinks it is another male and takes out its purported aggression in the form of a song.

The few bird keepers who keep song birds tend to favour species such as shrikes (*Lanidae* spp.), Drongos (esp. Greater racket tailed drongo), Redbilled leiothrix or Pekin robin (*Leiothrix lutea*). More common species in the song bird trade include the Shama (*Copsychus malabaricus*), Bulbuls (*Pycnonotidae* spp.) and chloropsis. Among exotics, the budgerigar is the most popular and favoured bird due to its colourful look and the low prices. The easy captive requirements and readily captive breeding nature throughout the year makes this bird the most popular cage bird throughout the world. The hardiness of this bird is proved by its longevity (it can survive for about 8-10 years).

There is high mortality in the pet trade in the region due to the following reasons:

1. For most species in the pet trade, no acclimatizing time is given to a bird after being caught from the wild and before being transported. The stress of capture causes high mortalities although a few days of acclimatization at the capture site can greatly reduce mortality. However, this is not possible because of the itinerant nature of the trappers, their rough handling, the economics of the trade.

2. The customer is very often not briefed on dietary specifications of the bird and more often than not all birds are recommended a *roti* or grain diet even if they are nectar feeders such as the sunbird or meat or fish eaters. Many species such as magpie robin, coppersmith, hoopoe, wagtails etc often become the victim of the corrupted trade.

3. The habit of transporting birds en masse causes heavy fatalities due to intraspecific aggression especially by pecking around the head and eye regions.

4. Small cages in which the birds are sold as well as the lack of food or water bowl adds to the chances of the bird dying even before the customer provides it with the requisite arrangements or just after that due to the stress caused in the interim.

5. A customer profile of the Indian bird fancier shows that most buyers are ignorant of avicultural practices or simple bird care and merely buy them to appease their children or to keep in their verandahs as attractive decoration pieces, leading to high mortality.

UTILIZATION PATTERN OF BIRDS

A stuffed Monal pheasant at a college museum.
Pix : TRAFFIC India

Hill myna is the most preferred softbill among Indian bird keepers because of its clarity in mimicking human voice.
Pix : Abrar Ahmed

A girl boldly displays her tamed parakeet. Roseringed parakeets are the most favoured among all pet birds.
Pix : Abrar Ahmed

SWAMP FRANCOLIN

Swamp francolin in a Lucknow bird market.

Pix : Abrar Ahmed

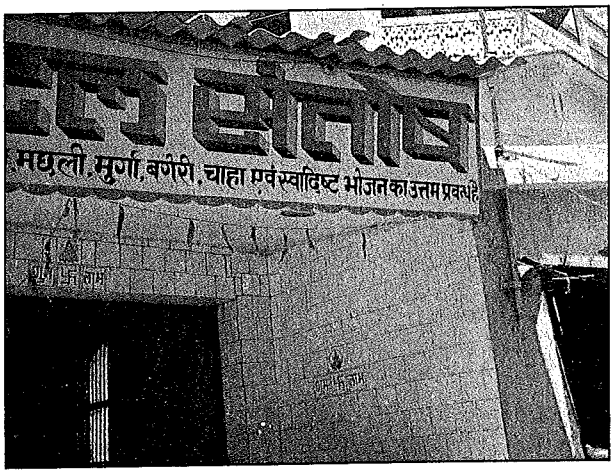
Map : 7 **Distribution, trapping and trade centres of Swamp francolin in northern India.**

Table bird trade

The table bird or edible bird trade is another large utilization area of Indian birds. This is largely a domestic trade and has very little international ramifications. The two groups of birds that make up the bulk of this trade are pheasants and waterbirds. Among waterbirds almost all species of duck, many waders, geese and even larger birds like cranes and pelicans are traded. Almost all pheasants, junglefowls, partridges and quails are also favoured dinner birds. A feature of the table bird trade is that some species may be eaten by a large cross-section of people and therefore enter the commercial village/small town trade while others are eaten only by specific communities (in many cases the bird trappers themselves) and therefore enter a more subsistence level trade.

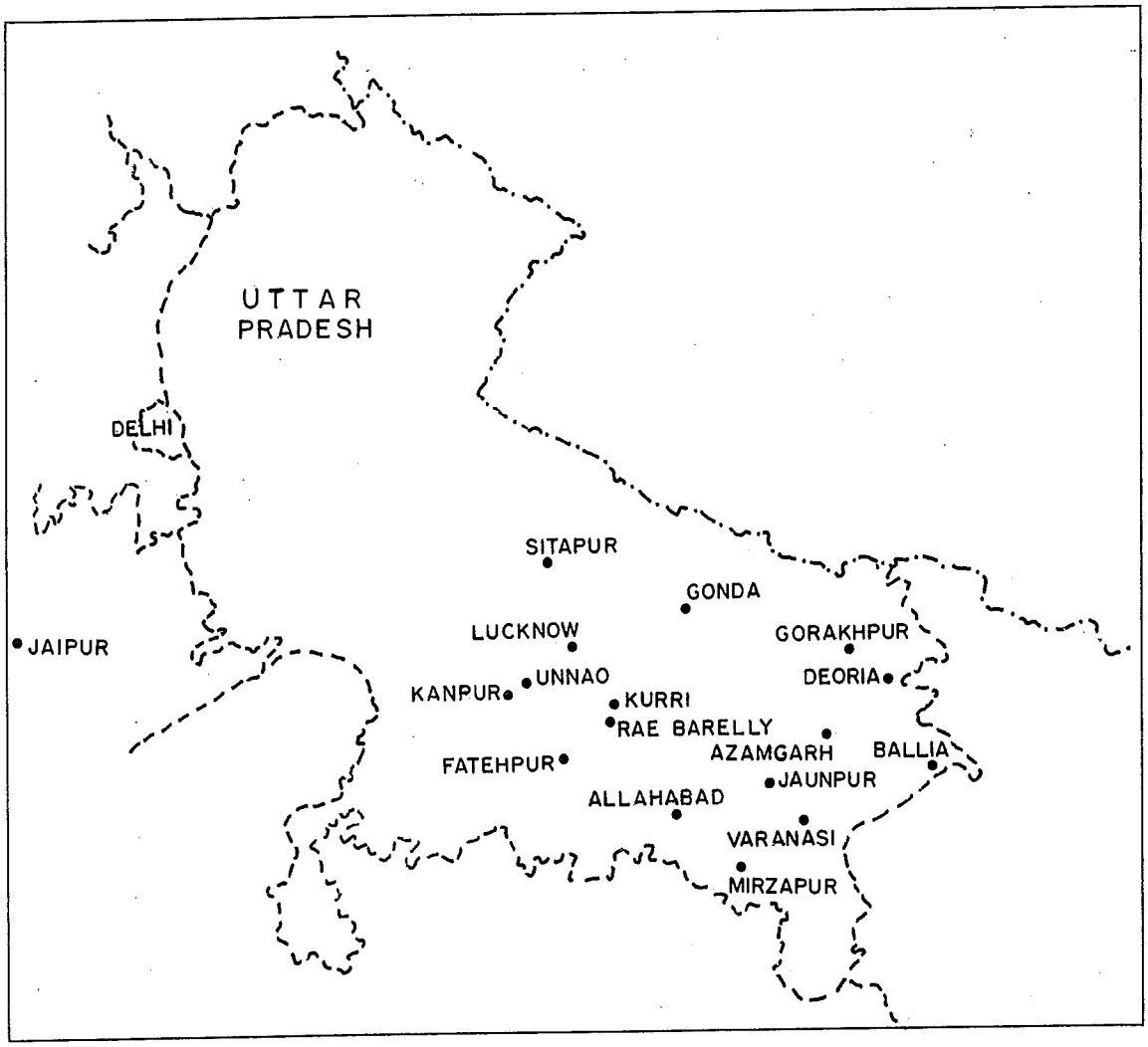
Man selling waders in Raebareilly.
Pix : TRAFFIC India

The largest waterbird markets in Northern India are at Unnao, Lucknow, Kanpur, Gorakhpur, Mirzapur and their surrounding villages. Normally in these markets, Sunday is the market day for table birds and these are sold in the open with the sellers killing and cleaning the birds upon request from the buyers. In these markets, table birds may be displayed either live or in a plucked and cleaned form. Normally species that are favourites in the trade are displayed live such as partridges, quails, pigeons etc. Cleaned avian meat is normally sold as *chaha* or *bhageri*. *Chaha* is technically a sandpiper and snipe meat although under this general term a large number of waterbird species are sold. *Bhageri* is a loose term that envelopes small species such as Red-headed bunting *(Emberiza bruniceps)* and doves and especially the females that are dull and cannot make it to the pet trade. However, under this term, a large number of birds are sold. The survey reveals that in Northern Indian cities such as Delhi, Varanasi and Lucknow, where a release trade is in existence (see next section and appendix III), birds that do not make the pet trade end up in this trade. However, in towns such as Lucknow and Kanpur such birds are more often than not cleaned and sold as table birds.



A hotel in eastern Uttar Pradesh advertising bird meat "Bhageri" and "Chaha". **Pix : Abrar Ahmed**

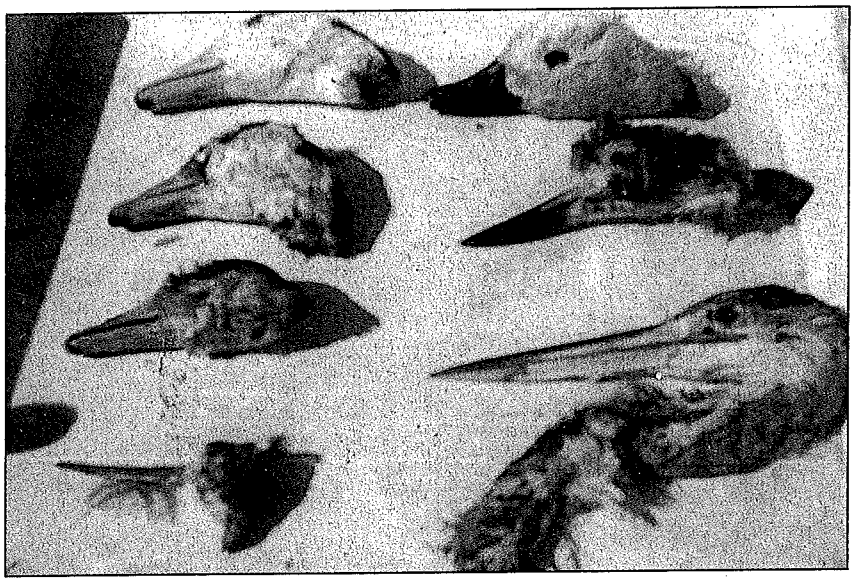
At Chiprana bazaar in Unnao and Parade bazar in Kanpur, the surveyor saw between 10-15 people selling 25 Bar-headed geese (*Anser indicus*), ±150 ducks and ± 200-300 waders. The waders consisted of Ruff and reeves (*Philomachus pugnax*), Little stints (*Calidris minutus*), lapwings (*Vanellus* spp), snipes (*Gallinago* sp), plovers (*Pluvialis* spp) and sandpipers (*Tringa* sp). The ducks meanwhile comprised of Northern pintail (*Anas acuta*), Ruddy shelduck (*Tadorna ferruginea*), Northern shovellers (*Anas clypeata*) etc. The birds are mostly caught at night using fine nets strung out across waterways and sometimes in the daytime with claptrap and snares. Sometimes certain species such as egrets are caught using birds of prey such as Shikra (*Accipiter badius*). Among the phasianidae, species in the table meat trade are Indian peafowl (*Pavo cristatus*), Red junglefowl (*Gallus gallus*), Black francolin (*Francolinus francolinus*), Grey francolin (*Francolinus pondicerianus*), Swamp francolin (*Francolinus gularis*), Rain quail (*Coturnix coromandelica*), Yellowlegged button quail (*Turnix tanki*) and Barred buttonquail (*Turnix suscitor*) Among these, the national bird, the peafowl is trapped almost throughout the region for meat. Unlike other gallinules, the peafowl is not



Map 8 : Important trade centres of water birds in Northern India.

killed by certain Hindu communities in the region for religious reasons although this tradition is no longer so widespread in modern times.

Apart from phasianid species, pigeons (*Columba livia, Treron phoenicoptera*) and Coucals (*Centropus sinense and C. bengalensis*) form three-quarters of the non-aquatic table-bird trade. The last mentioned species is normally caught as it strays into nets laid for patridges and quails and although largely an incidental catch, it is also an important species for the medicinal trade. The Eurasian thick-knee (*Burhinus oedicnemus*) and Spotted owlet (*Athene brahma*) are also eaten. The latter alongwith Indian roller (*Coracias bengalensis*), Brown-headed barbet (*Megailima zeylanica*), Black-rumped flameback (*Dinopium bengalensis*) etc are eaten by certain bird-trapping communities such as *Baheliya* tribes of Rae-Bareilly district. In Nepalgang (Uttar Pradesh - Nepal border), Roseringed parakeet (*Psittacula krameri*) chicks and sometimes adults are also eaten. This is however highly unusual in the general table bird trade. In other areas (i.e. Lucknow, Kanpur), pelican, egret and heron chicks were found to be specially captured for the table trade. In addition when the parent birds come to feed the chicks just prior to their capture, the enterprising trader also makes off with the fish brought by the adults by tying the chicks bill. During a field visit to Rae-Bareilly district of Uttar Pradesh, it was learnt that trappers in certain villages earmarked wetlands among themselves from which only that particular group could catch waterfowl. The birds in this case were baited with paddy and finally poisoned with some chemical causing high mortality. The dead birds were collected and cleaned to be sold in weekly village *haats* or markets.



Only heads of birds remain to show the avian diversity slaughtered for meat. **Pix : TRAFFIC-India**

The release trade

A particularly unique utilization pattern of birds in India is the release trade. Many communities in India such as the Jains, Parsis and Sindhis release a flock of birds on auspicious occasions and even otherwise to add to their piety. Especially on festive occasions such as the Mahavir Jayanti (the birthday of the founder of the Jain sect Lord Mahavira), Ganesh Chathurthi, Dussehra etc a large number of people release wild-caught birds in the erroneous belief that this good

deed of theirs would add to their piety. In fact most releases are the direct consequence of an urge to do good, often exhorted by priests and religious leaders to do the same. However, what many do not realise is that they are unwittingly killing the birds with their kindness as traders have now begun to catch several species just for this purpose.

This unique utilization practice has increased the demand for many species such as wagtails, kingfishers, bee-eaters, hoopoes etc which would otherwise not be caught being poor pet and table birds. Many places in Northern India have their own specialized species for the release trade although birds which can either be released in great numbers such as munias or birds which are aesthetically very pleasing such as kingfishers are preferred by the trade. In Lucknow for example both the Common crow (*Corvus splendens*) and the Jungle crow (*Corvus macrorhynchos*) are released on Thursdays and Fridays, a practice started by the old Nawab of Lucknow who used to free these species after tying superstitious ceremonial threads on the legs of the crow.

Similarly the Indian roller or Neelkanth (*Coracias benghalensis*) is considered an incarnation of Lord Shiva by many Hindus and is a much wanted species for release on the Hindu festival day of Dussehra. Trappers start catching the species a few days before the festival knowing that there would be a great demand to free the bird during the October festival. If the roller is not available or is out of stock then the White-breasted kingfisher (*Halcyon smyrnensis*), which is trapped much more easily is used as a substitute, a fact that laymen do not realise. Many a times Shikras (*Accipiter badius*) are released by Sikhs as the seller tells them that this bird was the favourite of their ancestor Guru Govind Singh. A religious belief is thus exploited to its maximum by the traders even to the extent of using trade substitutes and stand-ins!

The bird release business has proved to be greatly advantageous to the trapper who can now catch any species when he is out on a trapping mission. Almost all the birds that cannot be sold as pets or for the table can be sold through the release business thus ensuring a steady business. However, the bird releases do not do any good to the species itself due to a variety of reasons. The most obvious reason is that many species would not be able to survive if released outside their habitat. For example, if a hill bird caught in the upper reaches of Uttar Pradesh is released in the plains it would not survive in the wild. Also the mortality of such birds released is very high due to the stress and injury caused to them in the trade. Birds caught by the latex method, for instance, would be in no condition to fly if their feathers are damaged or still stuck by the glue. Similarly birds caught by a trained hawk (most commonly a Shikra), more often than not have injuries that do not heal fast enough for them to be released soon after catching. Even birds kept in the trade for long are often weak or have disabilities in their flight feathers causing high mortality soon after release. Weaknesses among birds released is especially the case with insectivorous birds such as shrikes, hoopoes, bee-eaters etc which would in all probability not have been fed by the trade due to the difficulty in the procurement of live insect food. These

UTILIZATION PATTERN OF BIRDS

A wealthy Jeweller releasing a Roseringed parakeet at Jama Masjid market, Delhi. **Pix : Roland Seitre**

Spotted owlet purchased by a customer as advised by a (Tantric) Black magician for fulfilment of his desires. **Pix : Abrar Ahmed**

Sparrow hawk being offered for sale in Moradabad bird market. **Pix : Abrar Ahmed**

UTILIZATION PATTERN OF BIRDS

Indian Peafowl

Even the National bird is not spared by trappers for food and aviculture.

Pix : TRAFFIC India

Pix : Abrar Ahmed

'Eggs collected from the wild are hatched using domestic hens and the chicks are later sold to wealthy people as ornamental pets for their gardens.

Pix : Abrar Ahmed

Great pied hornbill captured for zoo and medicinal purposes. Pix : Abrar Ahmed

birds which might have been starving for 2-3 days would definitely not be in a condition for release. During the survey, it was seen on many occasions that trappers left in the morning to trap the birds and returned with his catch by the evening, selling it to the dealer. The dealer would obviously only try and sell the bird on the following day and as a result it's not uncommon to find a bird that has been starved for more than twenty four hours. Often in the release trade customers place the order for the quantum and type of bird they would like released 2-3 days beforehand. This would mean that the trapper would swing into action immediately and the bird would be in the net even as much as 50 hours before release. As the sale of these birds does not depend on their survival beyond release, not much care is taken to feed the bird during the time of captivity.

During the months of June and July which is the trapping season for munias, the funnel net is used for trapping birds at their roosts. More often than not munias nest in mixed roosts with species such as Yellow-eyed babblers (*Chrysomma sinense*), Ashywren warbler (*Prinia sylvatica*), Reed warblers (*Acrocephalus* spp.) etc. Many of them also get caught along with the munias and although traditionally such unwanted species would be released at the site of capture, they are now retained for the release trade. Until the trapper strikes a deal with the dealer for the munias, which in this case was his primary interest, he does not separate the birds but continues to feed them only with a munia diet causing high mortality.

On many public ceremonies such as the foundation stone laying day of new complexes, factories, occasions such as Independence Day, sports functions, etc pigeons and other birds are released. The order is mainly for domesticated white pigeons but often it is satisfied by substitutes like doves and Blue rock pigeon. The release business therefore is one of the least sustainable trade practices that does not make sense either ecologically or even in the religious context. As the business clearly sparks of demand for a much larger number and diversity of birds than what is normally caught by the trade, it adds to the misery of the species rather than alleviating it.

Medicinal and miscellaneous trades

Many species of birds are used in the traditional medicines trade in Northern India. During the survey for instance, it was not uncommon to find a number of male House sparrows (*Passer domesticus*) for sale in bird markets. This is because Muslim medicine men or *hakims* prescribe the blood of the sparrow mixed with a concoction of herbs to be used as an aphrodisiac. This is also marketed in a pill form. Similarly, very often the blood of the Blue rock pigeon (*Columba livia*) if mixed with water and then vaporized is considered good for treating paralysis. The affected part is exposed to these vapors which is said to cure the disease. Similarly species such as the Grey hornbill (*Tockus griseus*) and the Indian tree pie (*Dendrocitta vagabunda*) are used for treating rheumatic pains while epilepsy demands the use of Wrynecks (*Jynx torquilla*). Freshly

killed Nightjar (*Caprimulgus* spp) blood is used by graziers for treating deep wounds of cows and buffaloes. Owls find a pride of place in the medicinal trade. Their various parts are used for witchcraft, sorcery and to treat diseases such as hysteria. All parts of the owl including feathers, claws etc have various uses in the black magic world and the bird is especially in demand during Diwali festival days in November. Two other species in the black magic trade are the Pied wagtail (*Motacilla alba*) and the Hoopoe (*Upupa epops*). The former is supposed to grow a crest in captivity which if cut off and kept with a person, facilitates travel throughout the world ! In reality the species does not grow a crest in captivity and in fact does not survive in captivity for very long. The Hoopoe is also used in sorcery with sacred threads being tied to its legs or its heart being removed for use in witchcraft. As mentioned earlier in the chapter, crows are also released after tying sacred threads ostensibly for protecting the family which releases it from black magic and evil omens.

SOCIO-ECONOMIC ASPECTS

Bird men and their socio-economic plight

The socio-economic aspects of the tribes that indulge in bird trapping was also briefly studied during these surveys. Although this study is not intended to be a sociological one and therefore the extent of investigation into this aspect was not very detailed, nevertheless this chapter is meant to serve as an outline for further research. During the surveys the following five main categories of bird trappers and traders were encountered

1. *Baheliyas or Chidimars*
2. *Pathamis or Jabjalies*
3. *Lodhis*
4. *Harreis*
5. *Mixed communities*

Baheliyas or Chidimars are Hindu bird trappers and dealers mostly hailing from the states of Uttar Pradesh, Punjab and few places in Haryana. They are very ancient tribes almost solely dependent on birds for their livelihood. After the ban on bird trapping and sale, a small number of them have changed to other professions such as tailoring, vegetable vendoring etc. However the vast majority of them still continue to be involved in the now illegal trade in one

Birdmen protesting against the total ban of their ancestral occupation. Their demand, "Unless some compensation or alternative is given, we will continue our traditional vocation or allow a few common species to be traded."

Pix : Ritwick Dutta

way or the other. Baheliyas are basically skilled trappers of terrestrial birds such as parakeets and munias and know very little or next to nothing about waterbird trapping. The community is also arranged hierarchically with trappers, dealers, sub-dealers, exporters etc all occupying different rungs of society. In older days the Baheliyas were considered an indispensable part of the society, as they were important providers of food.

Pathamis or Jabjalies are tribals of fishermen origin. They are Muslim trappers and sub-dealers with very few of the community rising to be dealers or exporters. They mostly hail from the areas around Allahabad, Unnao, Lucknow, Kanpur and Varanasi in Uttar Pradesh and are basically skilled at waterbird and other bird trappings. They occupy an important place among rural Muslims and normally trap all their birds for the table which they sell in the local bazaar. They also trap some phasianid species such as partridges, peafowl etc for their own eating purposes and lately have also entered the parakeet and munia trade. This is however not the rule and is still the exception. The side occupation of the community is net weaving and cage making, both very vital skills in the bird trade business.

The Lodhis and Harreis of Northern India are newer entrants into the bird trade business unlike the other two tribes. They are traditionally pig and poultry breeders, growers of fruits and vegetables and basket weavers. They could have picked up the skills of bird trapping from visiting Baheliyas or Jabjalis and now are engaged to a large extent in this profession.

Apart from the four tribes there exist mixed communities of Hindus and Muslims in places such as Punjab and Rajasthan who also trap and deal in birds.

Due to the large demand for birds for avicultural purposes in cities and towns, a large number of enthusiasts have sprung up who have transcended from being hobbyists to serious traders of live birds. They are mostly retailers dealing with the pet trade business and most of them deal mainly in exotic birds. The demand for Indian species is never diminishing and the activity of such enthusiasts can spur the demand even more at times. On the other hand, such bird enthusiasts can lessen the trade in wild caught birds by substituting them with captive bred birds.

During the survey it was clear that the trappers operated basically to meet the demand of local dealers who controlled a particular area. It was the dealer who supplied the retailer and exporter through whom the species reached the customer. As has been seen in surveys around the world, the trapper gets a pittance of the final sale proceeds of a bird. Most profits are made by traders and mark ups normally happen at the dealer and retailer levels. Despite previous work suggesting a great deal of care given to the bird by the trapper, this survey showed that the trapper has the least care for his birds vis-a-vis feeding and care while transporting, as his job is over when he gives it to a dealer which is very often within 24 hours. The trapper very rarely stocks birds which

is the jurisdiction and responsibility of the dealer. Often sub-dealers collect proceeds from the trappers from far-flung areas and deliver them to dealers in bird markets. In this case the increase of the price becomes even more. Some basic socio-economic facts gleaned about the trappers during this survey are as follows:

1. Trappers manage to earn between Rs. 30-150 per day depending on their catch. This translates into an average of Rs. 2700 (US $77) per month which compares favourably with the GNP per capita income of US $ 310 (1994) India (*The Statesman's Year Book* 1996-97).

2. Very little money earned is saved as the earning is on a daily basis and much is spent in drinking and merry making.

3. Very few trappers live in permanent houses or send their children to school which are indicators of a lower socio-economic status in India. This is despite the fact that their cumulative monthly earnings are enough to do some of the above.

DISCUSSION AND RECOMMENDATIONS

The wild trade was and continues to be the most diversified in terms of species diversity and volume. Despite such an extensive study, there is a lot left to be known about the bird trade and population status of wild birds in commerce, hence no hasty conclusions can be made. However, based on the study, some aspects have emerged which need to be discussed and highlighted for forming conservation strategies :

1. Species such as Green munia, Finn's baya and Swamp francolin present in the trade need to be shifted from Schedule IV of WPA to Schedule-I and to be included in CITES.

2. Enforcement staff need to be better trained and provided with identification tips. The status of species like Blacknecked stork, Sarus crane etc needs to be well publicized so as to stop illegal trade in them. The purchase of birds by government zoos should be also strictly regulated as instances of zoos buying birds from wildlife dealers came to light during the surveys.

3. Encouragement of captive breeding of popular exotic species already in circulation in India can prove to be an ideal solution to the illegal wild bird trade. With this, the already existing cage bird species such as Budgerigar, Cockatiel, Zebra finches, Lovebirds, Java sparrow, Bengalese finch, Canary etc can be made available at cheaper prices. During the surveys it was noticed that most of the buyers were initially attracted by the captive bred species but switched over to the wild munia or the parakeet due to the high price of the exotics. (A pair of Red munia is available for Rs. 10-20, while a captive bred bird of the same size and some what similar colour such as the Zebra finch may command Rs. 100). Therefore the customer automatically opts for the Red munia.

4. The problem of people engaged in this illegal occupation needs to be looked into in a humane way. After all they have a traditional expertise in bird trapping and keeping, which can be constructively utilized for scientific management and wildlife studies. For instance the northern hill trappers have a thorough knowledge of hill birds which has not been documented anywhere. This knowledge can be a source of research on high altitude avifauna and these trappers can be used by researchers as field guides. Rehabilitation of bird men into alternate jobs, especially in zoos, will be an important step in reducing the illegal trade. Secondly this will also help in better upkeep of birds and animals in zoological parks. We need to spread awareness among the illiterate trappers on conservation and this can only be possible if we give them alternate jobs/ compensation, for after all, bird catching is currently their only source of livelihood.

5. Media can be used to make public appeals to discourage the purchase of wild birds and also to expose problems like cruelty involved in capture, mortality during transportation of wild birds, etc.

6. There is a need for better enforcement at the main trading establishments at regular intervals. Some of the locations have never been checked due to complacency or lack of knowledge on the part of the wildlife authorities. Knowledge of the species is important otherwise they may fall for the traders con. In fact once during the survey it was seen that Green munias were left during a raid in Delhi by the enforcement staff as they believed the trader's word that it was an exotic species!

7. Airline, railway and roadways staff need to be made aware of the importance of not transporting any wild animal. Imposition of fines could be a deterrent. Booking of wildlife items should be discouraged and checking of consignment under false names should be investigated on a regular basis.

8. Strictly regulated internal trade in limited number of common Indian species such as Roseringed parakeet, Blue rock pigeon and some munias can be allowed on an annual quota basis. Till now there have been no wild population studies of most bird species in trade. If any sustainable harvest theory needs to be applied in future, it is extremely important to know population status of species and its existing habitat. Also no study on the impact of trade on wild populations of any species has been done, therefore nothing more substantial than the above remedies can be thought for opening trade at this time.

APPENDIX - I

Species and prices recorded in the Live Bird Trade in Northern India

S. No.	English name	Scientific name	Local trade name*	Prices at level I** (In Indian Rupees)	Prices at level II*** (In Indian Rupees)
	PODICIPEDIDAE				
1.	Little grebe	*Tachybaptus ruficollis* (*Podiceps ruficollis*)	Choti pandubi	3 -5	8 -15
	PELECANIDAE				
2.	Rosy or White pelican	*Pelecanus onocrotalus*	Hawasal, Hawaseel	60-200	150-1000
	ARDEIDAE				
3.	Grey heron	*Ardea cinerea*	Anjan	8-20	35-75
4.	Purple Heron	*Ardea purpurea*	Lal anjan	8-25	35-75
5.	Indian pond heron (Pond heron)	*Ardeola grayii*	Chamariya	3-8	10-15
6.	Cattle egret	*Bubulcus ibis*	Surkhiya	3-8	10-15
7.	Great egret (Large egret)	*Casmerodius albus* (*Ardea alba*)	Malank	6-15	15-40
8.	Intermediate egret (Smaller)	*Mesophoyx intermedia* (*Egretta intermedia*)	Pathauk	5-11	15-35
9.	Little egret	*Egretta garzetta*	Karchiya	3-8	8-15
10.	Black-crowned night heron (Night heron)	*Nycticorax nycticorax*	Vaak	8-25	15-35

* Refers to various names used by the dealers and sometimes consumers in Northern India.

** Level - I shows the prices at the trapper or at the sub-dealer/dealer level.

*** Level - II shows the prices at the main outlets and market with the minimum price range. The higher limit in level II shows the higher side of selling price which may vary upwardly depending on the type of customer and the demand.

Appendix - I (Contd...)

Species and prices recorded in the Live Bird Trade in Northern India

S. No.	English name	Scientific name	Local trade name*	Prices at level I** (In Indian Rupees)	Prices at level II*** (In Indian Rupees)
	CICONIIDAE				
11.	Painted stork	*Mycteria leucocephala*	Jangil	30-70	50 -250
12.	Asian openbill (Openbill stork)	*Anastomus oscitans*	Gaugila	30-70	50-250
13.	Woolly-necked stork (Whitenecked stork)	*Ciconia episcopus*	Laglag	50-125	100-500
14.	White stork	*Ciconia ciconia*	Kanakul, Gybar	100-300	500-1500
15.	Blacknecked stork	*Ephippiorhynchus asiaticus*	Loha sarank	150-300	500-2000
	THRESKIORNITHIDAE				
16.	Black-headed ibis (White ibis)	*Threskiornis melanocephalus (T. aethiopicus)*	Kuldakadi, Didda	30-50	75-175
17.	Eurasian spoonbill (Spoonbill)	*Platalea leucorodia*	Chimta	30-50	75-175
	PHOENICOPTERIDAE				
18.	Lesser flamingo	*Phoenicopterus minor (Phoeniconaias minor)*	Chota rajhans	60-125	150-600
19.	Greater flamingo (Flamingo)	*Phoenicopterus ruber (P. roseus)*	Rajhans	60-125	150-600

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Species and prices recorded in the Live Bird Trade in Northern India

S. No.	English name	Scientific name	Local trade name*	Prices at level I** (In Indian Rupees)	Prices at level II*** (In Indian Rupees)
	ANATIDAE				
20.	Greylag goose	*Anser anser*	Saman	40-80	60-150
21.	Barheaded goose	*Anser indicus*	Kaaj	40-80	60-175
22.	Lesser whistling -duck (Lesser whistling teal)	*Dendrocygna javanica*	Salehi	15-40	30-60
23.	Ruddy shelduck	*Tadorna ferruginea*	Surkhab, Chakwa-chakvi	25-45	40-150
24.	Common shelduck	*Tadorna tadorna*	Chanjwa	60-100	80-250
25.	Northern pintail (Pintail)	*Anas acuta*	Sikpar	20-40	35-80
26.	Common teal	*Anas crecca*	Chikkala, Chota sikpar	10-20	20-35
27.	Spot-billed duck	*Anas poecilorhyncha*	Garampair	30-60	55-80
28.	Mallard	*Anas platyrhynchos*	Neelsar	40-80	50-200
29.	Gadwall	*Anas strepera*	Mail	30-60	45-100
30.	Eurasian wigeon (Wigeon)	*Anas penelope*	Farhan	30-40	40-60
31.	Garganey	*Anas querquedula*	Patri	15-30	25-60
32.	Northern shoveller (Shoveller)	*Anas clypeata*	Gahna, Bhanbhana	30-40	35-60
33.	Redcrested pochard	*Netta rufina*	Lalsar	40-80	50-200
34.	Common pochard	*Aythya ferina*	Budhan	25-40	35-80

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35.	Tufted duck	*Aythya fuligula*	-	25-40	35-80
36.	Cotton pygmy-goose (Cotton teal)	*Nettapus coromandelianus*	Girha	8-15	15-30
37.	Comb duck	*Sarkidiornis melanotos*	Nakta	35-80	50-120
	ACCIPITRIDAE				
38.	Black-winged kite	*Elanus caeruleus*	Tharthariya	10-50	50-300
39.	Oriental Honey-buzzard (Honey-buzzard)	*Pernis ptilorhyncus*	Muhath	40-100	100-400
40.	Black kite (Pariah kite)	*Milvus migrans*	Cheel	30-100	75-250
41.	Shikra	*Accipiter badius*	Sikra, Chipak	5-80	20-400
42.	Buzzards	*Butea spp.*	Chuhamar	50-100	100-300
43.	Pallid harrier (Pale harrier)	*Circus macrourus*	Patai	20-100	75-200
44.	Western Marsh harrier (Marsh harrier)	*Circus aeruginosus*	Patai	20-100	75-200
45.	Eurasian tawny eagle (Tawny eagle)	*Aquila vindhiana (Aquila rapax vindhiana)*	Okab	20-100	75-200
46.	Osprey	*Pandion haliaetus*	Machmanga	50-100	75-300

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	FALCONIDAE				
47.	Saker or Cherrug falcon	*Falco cherrug (Falco biarmicus cherrug)*	Charak	100-5,000	500-70,000
48.	Laggar falcon	*Falco jugger (Falco biarmicus jugger)*	Laggar	100-1,000	1,000 -10,000
49.	Peregrine falcon	*Falco peregrinus (Falco peregrinus japonensis)*	Baheri	100-3,000	1,000-50,000
50.	Shaheen falcon	*Falco peregrinus peregrinator*	Shaheen,Koyila(M), Koi (F)	100-3,000	1,000-30,000
51.	Red-necked falcon (Redheaded merlin)	*Falco chicquera*	Turumti	50-500	500-5,000
52.	Common kestral (Kestral)	*Falco tinnunculus*	Khourmoutiya	15-40	25-400
	PHASIANIDAE				
53.	Chukar (Chukar partridge)	*Alectoris chukar*	Chakor	300-600	1,000-2,500
54.	Black francolin (Black patridge)	*Francolinus francolinus*	Kala teetar.	15-35	30-200
55.	Grey francolin (Grey patridge)	*Francolinus pondicerianus*	Bhura teetar	112-30	30-70
56.	Swamp francolin (Swamp patridge)	*Francolinus gularis*	Kaker	30-70	100-500

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57.	Rain quail (Black breasted quail)	*Coturnix chinensis*	Chanak	3-8	8-20
58.	Kaleej or Kalij pheasant	*Lophura leucomelana*	Khalij	300-400	2,000-5,000
59.	Red junglefowl	*Gallus gallus*	Jungli/Pahari murga	50-100	75-200
60.	Indian peafowl (Common peafowl)	*Pavo cristatus*	Mor, Chotiwala, Pargana,Murela	30-100	100-1,000
	TURNICIDAE				
61.	Yellowlegged button quail	*Turnix tanki*	Lava	3-6	8-20
62.	Barred buttonquail (Common bustard-quail)	*Turnix suscitator*	Gudala	3-6	8-20
	GRUIDAE				
63.	Common crane	*Grus grus*	Kurja, Goonj	100-200	300-1,000
64.	Sarus crane	*Grus antigone*	Sarus	100-300	300-1,500
65.	Demoiselle crane	*Grus virgo (Anthropoides virgo)*	Karkara	100-200	300-750
	RALLIDAE				
66.	Whitebreasted waterhen	*Amaurornis phoenicurus*	Banmurgi, Jalmurgi	4-10	8—20
67.	Watercock	*Gallicrex cinerea*	Kora	not found	20-30

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68.	Common moorhen (Moorhen)	*Gallinula chloropus*	Jalmurghi, Banmurgi	5-10	8-20
69.	Purple swamphen (Purple moorhen)	*Porphyrio porphyrio*	Kaim, Kaima	8-12	20-75
70.	Common coot (Coot)	*Fulica atra*	Tilak	6-12	20-30
	JACANIDAE				
71.	Pheasant-tailed jacana	*Hydrophasianus chirurgus*	Piyuh, Tal makhani	4-15	12-60
72.	Bronze winged jacana	*Metopidius indicus*	Kundiya	4-15	12-60
	ROSTRATULIDAE				
73.	Greater painted snipe (Painted snipe)	*Rostratula benghalensis*	Rajchaha	3-6	5-20
	RECURVIROSTRIDAE				
74.	Blackwinged stilt	*Himantopus himantopus*	Lamtinga, Lalpairi	3-6	5-20
75.	Pied avocet (Avocet)	*Recurvirostra avosetta*	Kuchaha	not found	not found
	BURHINIDAE				
76.	Eurasian thick-knee (Stone curlew)	*Burhinus oedicnemus*	Karvanak	8-15	12-40

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	CHARADRIIDAE				
77.	Sandpipers	*Tringa spp.*	Chaha	3-5	4-10
78.	Whitetailed lapwing	*Vanellus leucurus*	Saphed dum ki titairi	4-8	4-20
79.	Redwattled lapwing	*Vanellus indicus*	Titairi	4-8	5-25
	PTEROCLIDIDAE				
80.	Chestnut-bellied sandgrouse (Indian sandgrouse)	*Pterocles exustus*	Bhat titar,Gatta (not seen but in trade)	not found	not found
81.	Painted sandgrouse	*Pterocles indicus indicus*	Pahadi Bhattitar (not seen but in trade)	not found	not found
	COLUMBIDAE				
82.	Yellow-footed green pigeon (Yellowlegged green pigeon)	*Treron phoenicoptera*	Hariyal	8-16	15-50
83.	Rock pigeon (Bluerock pigeon)	*Columba livia*	Kabootar, Jangli kabootar	4-10	8-20
84.	Eurasian collared-dove (Indian ring dove)	*Streptopelia decaocto*	Bada phagta	3-6	5-30
85.	Oriental turtle dove (Rufous turtle dove)	*Streptopelia orientalis*	Lal phagta	3-6	5-20

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S. No.	English name	Scientific name	Local trade name*	Prices at level I** (In Indian Rupees)	Prices at level II*** (In Indian Rupees)
86.	Spotted dove	*Streptopelia chinensis*	Chitta phagta	10-15	15-35
87.	Laughing dove (Little brown dove)	*Streptopelia senegalensis*	Chota phata	3-5	4-12
88.	Emerald or Bronze winged dove	*Chalcophaps indica*	Sohanphata, Sunphata	30-80	75-200
	PSITTACIDAE				
89.	Alexendrine parakeet	*Psittacula eupatria*	Pahadi tota, Channa,	30-120	80-350
90.	Roseringed parakeet	*Psittacula krameri*	Desi tota, Kantiya(m) Labor (f)tota.	4-20	10-75
91.	Red-breasted parakeet	*Psittacula alexandri*	Madna, Madankhor	35-70	50-250
92.	Plum-headed parakeet (Blossomheaded parakeet)	*Psittacula cyanocephala*	Lalsar(m) Udy(f), Tuiya tota	5-30	15-150
93.	Slatyheaded parakeet	*Psittacula himalayana*	Jirri, Jhaiya	6-20	25-200
94.	Eastern blossomheaded parakeet	*Psittacula roseata*	Lalsir tota, phultusi tota	5-30	20-150
95.	Malabar parakeet (Bluewinged parakeet)	*Psittacula columboides*	Bluewing	100-200	200-500
96.	Vernal hanging-parrot (Indian lorikeet)	*Loriculus vernalis*	Latkan tota	not found	100-200

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	CUCULIDAE				
97.	Pied cuckoo (Pied crested cuckoo)	*Clamator jacobinus*	Papaiya	5-10	10-50
98.	Brainfever bird or Common hawk cuckoo	*Cuculus varius*	Bansariya, Papaiya	5-10	10-50
99.	Indian cuckoo	*Cuculus micropterus*	Papaiya	5-10	10-50
100.	Asian koel (Koel)	*Eudynamys scolopacea*	Koel	8-20	15-150
101.	Sirkeer malkoha (Sirkeer cuckoo)	*Phaenicophaeus leschenaultii (Taccocua leschenaultii)*	Sargul	not found	not found
102.	Greater coucal (Crow pheasant)	*Centropus sinensis*	Mahoka	15-25	40-150
103.	Lesser coucal	*Centropus bengalensis (C.toulou)*		10-20	not found
	STRIGIDAE				
104.	Barn owl	*Tyto alba*	Rustak	60-150	100-400
105.	Eastern grass-owl (Grass owl)	*Tyto longimembris (T. capensis)*	Ghas ka ullu	60-150	100-400
106.	Collared scops owl	*Otus lempiji (O. bakkamoena)*	Kanutti, Chota kan ka ullu	40-125	100-350

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107.	Eurasian eagleowl (Great horned owl)	*Bubo bubo*	Lalanka, Surkhiya	100-350	400-3,000
108.	Dusky eagle owl (Dusky horned owl)	*Bubo coromandus*	Badka, Burmunda	100-350	400-3,000
109.	Brown fish owl	*Ketupa zeylonensis*	Hunhuna *(Bubo zeylonensis)*	100-350	400-3,000
110.	Jungle owlet	*Glaucidium radiatum*	Pahadi chugdi	20-50	100-200
111.	Asian barred owlet (Barred owlet)	*Glaucidium cuculoides*	Chugad	20-50	100-200
112.	Spotted owlet	*Athene brama*	Chugdi, Khas kudar	15-25	70-300
	CAPRIMULGIDAE				
113.	Indian nightjar (Common Indian nightjar)	*Caprimulgus asiaticus*	Chapka	not found	not found
	ALCEDINIDAE				
114.	Pied kingfisher (Lesser pied kingfisher)	*Ceryle rudis*	Chitkabra kaudilla	not found	25-100
115.	Common kingfisher	*Alcedo atthis*	Chota kaudilla	not found	100

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116.	White-throated kingfisher (White breasted kingfisher)	*Halcyon smyrnensis*	Kaudilla	3-10	5-50
	MEROPIDAE				
117.	Chestnutheaded bee-eater	*Merops leschenaulti*	Lalsir ka pataina	not found	25-50
118.	Little green bee-eater (Green bee-eater)	*Merops orientalis*	Pataina	2-4	5-10
	CORACIIDAE				
119.	Indian roller	*Coracias benghalensis*	Subjak, Neelkant, Nelayi	20-50	60-300
	UPUPIDAE				
120.	Eurasian Hoopoe (Hoopoe)	*Upupa epops*	Dupchara, Hudhud	5-20	8-250
	BUCEROTIDAE				
121.	Indian grey hornbill (Common grey hornbill)	*Ocyceros birostris (Tockus birostris)*	Dhanesh	40-100	100-300
122.	Oriental pied hornbill (Indian pied hornbill)	*Anthracoceros albirostris (A. malabaricus)*	Bara dhanesh	200-300	300-700
123.	Great hornbill (Great pied hornbill)	*Buceros bicornis*	Pahadi danesh	300-500	400-1,000

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	CAPITONIDAE				
124.	Great barbet (Great hill barbet)	*Megalaima virens*	Dhabara, Pahari basantha	50-100	100-300
125.	Brown-headed barbet (Green barbet)	*Megalaima zeylanica*	Bukrum Hara basantha	15-30	20-100
126.	Coppersmith barbet (Crimsombreasted barbet)	*Megalaima haemacephala*	Gulbadna	2-10	5-50
127.	Blue-eared barbet	*Megalaima australis*	Bada gulbadna	not found	not found
	PICIDAE				
128.	Eurasian wryneck (Wryneck)	*Jynx torquilla*	Guchmudaiya	10-25	50-100
129.	Black-rumped flameback (Lesser goldenbacked woodpecker)	*Dinopium benghalense*	Jashrath, Kathpodva	10-30	25-100
130.	Yellow-crowned woodpecker (Yellowfronted pied woodpecker)	*Dendrocopus mahrattensis (Picoides mahrattensis)*	Chota jashrath	10-25	20-75
	PITTIDAE				
131.	Indian pitta	*Pitta brachyura*	Navrang, Dudhpui	25-40	125-250

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	ALAUDIDAE				
132.	Indian lark (Redwinged bush lark)	*Mirafra erythroptera*	Lalpari	2-5	5-20
133.	Ashycrowned sparrow-lark (Ashy crowned finch lark)	*Eremopterix grisea*	Ghutariya	2-5	5-25
134.	Greater short-toed lark (Short-toed lark)	*Calandrella branchydactyla (C. cinerea)*	Agan	2-5	5-20
135.	Crested lark	*Galerida cristata*	Chandool	2-5	5-20
	HIRUNDINIDAE				
136.	Swallow	*Hirundo rustica*	Hababel	10-20	50-150
137.	Wiretailed swallow	*Hirundo smithii*	Hababel	10-20	50-150
	LANIDAE				
138.	Northern shrike (Grey shrike)	*Lanius excubitor*	Latura	3-5	4-40
139.	Baybacked shrike	*Lanius vittatus*	Chota latura,Hazardastan	3-5	4-40
140.	Long-tailed shrike (Rufousbacked Shrike)	*Lanius schach*	Bada latura, Hazardastan	3-5	4-40
141.	Brown shrike	*Lanius cristatus*	Safed latura	3-5	4-40

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	ORIOLIDAE				
142.	Eurasian golden oriole (Golden oriole)	*Oriolus oriolus*	Peelakh	20-40	25-300
143.	Blackhooded oriole (Blackheaded oriole)	*Oriolus xanthornus*	Kali topi ki peelakh	40-50	25-300
144.	Marroon oriole	*Oriolus traillii*	Surkh-peelakh	not found	not found
	DICRURIDAE				
145.	Black drongo	*Dicrurus macocercus (D. adsimillis)*	Bhujhanga	5-10	10-70
146.	Greater racket-tailed drongo	*Dicrurus paradiseus*	Bhrangraj	60-125	100-500
	STURNIDAE				
147.	Chestnut-tailed starling (Greyheaded myna)	*Sturnus malabaricus*	Kanji pawai, Safed sar ke maina	2-20	5-75
148.	Sub species	*Sturnus. m.blythii*	-do-	2-20	5-75
149.	Brahminy starling (Brahminy myna)	*Sturnus pagodarum*	Pawai	3-15	5-75
150.	Rosy starling (Rosy pastor)	*Sturnus roseus*	Kashnai	10-20	15-100

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151.	Common starling (Starling)	*Sturnus vulgaris*	Tiliyar	3-10	5-250
152.	Asian pied starling (Pied myna)	*Sturnus contra*	Albakka, Albak maina	1.50-5	3-30
153.	Common myna	*Acridotheres tristis*	Dhardwa, Sadi-maina	1.50-5	3-30
154.	Bank myna	*Acridotheres ginginianus*	Chai, Ghudsal	1.50-5	3-30
155.	Jungle myna	*Acridotheres fuscus*	Kanji dhardwa	2-10	4-30
156.	Hill myna	*Gracula religiosa*	Pahadi myna	175-350	250-750
157.	Lesser hill myna	*Gracula religiosa indica*	Cochiniya myna	75-125	125-250
	CORVIDAE				
158.	Eurasian jay (Redcrowned jay)	*Garrulus glandarius*	Uni-bansariya	20-40	100-200
159.	Blackheaded jay (Blackthroated jay)	*Garrulus lanceolatus*	Kanta bansariya	20-40	100-200
160.	Green magpie	*Cissa chinensis*	Hari	100-150	200-1,000
161.	Blue magpie (Redbilled blue magpie)	*Urocissa erythrorhyncha*	Lampuchiya, Kabri	100-150	200-1,000

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Appendix - I (Contd...)

Species and prices recorded in the Live Bird Trade in Northern India

S. No.	English name	Scientific name	Local trade name*	Prices at level I** (In Indian Rupees)	Prices at level II*** (In Indian Rupees)
162.	Rufous tree pie (Indian tree pie)	*Derndrocitta vagabunda*	Malhat, Maar, Lamdor	5-30	20-250
163.	Grey tree pie (Himalayan tree pie)	*Dendrocitta formosae*	Pahadi malhat	30-35	100-200
164.	House crow	*Corvus splendens*	Kouva	8-15	15-100
165.	Jungle crow	*Corvus levaillantii (C. macrorhynchos)*	Pahadi kouva	15-40	50-200
	CAMPEPHAGIDAE				
166.	Scarlet minvet	*Pericrocotus flammeus*	Saheli	20-40	50-200
167.	Small minvet (Little minvet)	*Pericrocotus cinnamomeus*	Choti saheli	20-30	50-150
	IRENIDAE				
168.	Common iora	*Aegithina tiphia (Aegithinla tiphia)*	Bada babuna	not found	not found
169.	Golden-fronted leafbird (Golden-fronted chloropsis)	*Chloropsis aurifrons*	Hareva, Hara basantha	30-60	100-300
170.	Blue-winged leafbird (Gold mantled chloropsis)	*Chloropsis cochinchinensis*	-do-	30-60	100-300
171.	Orangebellied leafbird	*Chloropsis hardwickii*	Udha hareva	50-100	100-400

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Species and prices recorded in the Live Bird Trade in Northern India

S. No.	English name	Scientific name	Local trade name*	Prices at level I** (In Indian Rupees)	Prices at level II*** (In Indian Rupees)
	PYCNONOTIDAE				
172.	Black-crested bulbul (Blackheaded yellow bulbul)	*Pycnonotus melanicterus flaviventris*	Basanti bulbul, Pili bulbul	30-50	100-200
173.	Redwhiskered bulbul	*Pycnonotus jocosus*	Lal kaan ki bulbul, Kangra bulbul	3-12	10-75
174.	White-eared bulbul	*Pycnonotus leucotis*	Singu	8-15	15-75
175.	Himalayan bulbul (Whitecheeked bulbul)	*Pycnonotus leucogenys*	Ulti choti ka kangra, Safed kaan ki bulbul	8-20	75-100
176.	Redvented bulbul	*Pycnonotus cafer*	Bulbul	2-15	5-75
177.	Redvented bulbul (hill ssp)	*P.c.. bengalensis*	Katesha, Bari bulbul	2-15	5-75
178.	Ashy bulbul (Browneared bulbul)	*Hemixos flavala* (Hypsipetes flavalus)	Sipru, Bulbul	15-30	50-150
179.	Black bulbul	*Hypsipetes leucocephalus*	Rechual, Kali bulbul	25-40	50-200
	MUSCICAPIDAE				
	Subfamily : Timalinae				
180.	Indian-scimitar babbler (Slatyheaded scimitar babbler)	*Pomatorhinus horsfieldii*	Chameli	15-30	50-150

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Appendix - I (Contd...)

Species and prices recorded in the Live Bird Trade in Northern India

S. No.	English name	Scientific name	Local trade name*	Prices at level I** (In Indian Rupees)	Prices at level II*** (In Indian Rupees)
181.	Yelloweyed babbler	*Chrysomma sinense*	Gulchasm	3-8	5-15
182.	Common babbler	*Turdoides caudatus*	Gogai	3-8	5-15
183.	Striated babbler	*Turdoides earlei*	Pengdi	3-8	5-15
184.	Jungle babbler	*Turdoides striatus*	Gogai, Sath bhai	3-8	5-15
185.	Whitethroated laughing thrush	*Garrulax albogularis*	Chandtara, Gogai	15-45	50-250
186.	Striated laughingthrush	*Garrulax striatus*	Navratan	15-45	50-250
187.	Whitecrested laughing thrush	*Garrulax leucolophus*	Guppoo	15-45	50-250
188.	Chestnut crowned laughing thrush (Redheaded laughingthrush)	*Garrulax erythrocephalus*	Reshmi guldar	25-60	100-300
189.	Silvereared mesia	*Leiothrix argentauris*	Gulsehra	40-100	125-250
190.	Redbilled leiothrix, Pekin robin	*Leiothrix lutea*	Sehra, Robin	15-35	100-75
191.	Chestnut tailed minla (Barthroated siva)	*Minla strigula*	Guldar	20-40	100-175
192.	Bluewinged minla (Bluewinged siva)	*Minla cyanouroptera*	Noorposh, Blue robin	15-35	75-150

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Appendix - I (Contd...)

Species and prices recorded in the Live Bird Trade in Northern India

S. No.	English name	Scientific name	Local trade name*	Prices at level I** (In Indian Rupees)	Prices at level II*** (In Indian Rupees)
193.	Whiskered yuhina (Yellownapped yuhina)	*Yuhina flavicollis*	Botiya	15-35	75-100
194.	Blackchinned yuhina	*Yuhina nigrimenta*	Choti botiya	12-30	50-125
195.	Whitebellied yuhina	*Yuhina xantholeuca*	Botiya	10-20	not found
196.	Rufous sibia (Blackcapped sibia)	*Heterophasia capistrata*	Kathai	18-40	50-125
	Subfamily : Muscicapinae				
197.	Rufousbellied niltava	*Muscicapa sundara*	Sunehra	15-35	125-300
198.	Small niltava	*Niltava macgrigoridae (Muscicapa macgrigoridae)*	Chota sunehra	15-30	100-250
199.	Large niltava	*Niltava grandis (Muscicipa grandis)*	Bara sunehara	15-40	125-300
200.	Verditer flycatcher	*Eumylas thalassina (Muscicapa thalassina)*	Phirozi	.15-40	not found
201.	Grey-headed canary-flycatacher (Greyheaded flycatcher)	*Culicicapa ceylonensis*	Pahadi botiya	5-10	5-20
202.	Paradise flycatcher	*Terpsiphone paradisi*	Bulbul gosta	10-20	not found
203.	Whitebrowed fantail flycatcher	*Rhipidura aureola*	Nachaniya	10-20	100-150

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Appendix - I (Contd...)

Species and prices recorded in the Live Bird Trade in Northern India

S. No.	English name	Scientific name	Local trade name*	Prices at level I** (In Indian Rupees)	Prices at level II*** (In Indian Rupees)
	Subfamily : Sylvinae				
204.	Ashy wren-warbler	*Prinia socialis*	Phudki	not found	5-10
	Subfamily : Turdinae				
205.	Black redstart	*Phoenicurus ochruros*	Tharthira,Shakarkampi	2-10	5-40
206.	Whitecapped redstart	*Chaimarrornis leuecocephalus*	Chandeli	20-50	100-300
207.	Plumbeous redstart	*Rhyacornis fuliginosus*	Choti chandeli	20-40	40-150
208.	Stone chat	*Saxicola torquata*	Khar pidda	5-20	10-100
209.	Brown rock chat	*Cercomela fusca*	Dhama, Choti shama	2-10	5-25
210.	Pied bush chat	*Saxicola caprata*	Pidda	5-20	10-100
211.	Indian robin	*Saxicoloides fulicata*	Kalchiri	5-20	10-100
212.	Shama	*Copsychus malabaricus malabaricus*	Shyama	20-50	150-300
213.	Magpie robin	*Copsychus saularis*	Dayyar	5-10	15-30
214.	Blue rock thrush	*Monticola solitarius*	Gingaar	not found	10-30
215.	Blackbird	*Turdus merula*	Kastura	not found	150-300
	PARIDAE				
216.	Great tit (Grey tit)	*Parus major*	Pahadi chironta	5-20	50-100

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Appendix - I (Contd...)

Species and prices recorded in the Live Bird Trade in Northern India

S. No.	English name	Scientific name	Local trade name*	Prices at level I** (In Indian Rupees)	Prices at level II*** (In Indian Rupees)
217.	Greenbacked tit	*Parus monticolus*	Kaneri	8-20	50-100
218.	Blackthroated Tit (Redheaded tit)	*Aegithalos concinnus*	Languri	8-20	50-100
	SITTIDAE				
219.	Chestnutbellied nuthatch	*Sitta castanea*	Kathkudia	10-25	50-150
	MOTACILLIDAE				
220.	White-browed wagtail (Large pied wagtail)	*Motacilla maderaspatensis*	Khanjan, Dhoban chidiya	4-50	50-200
221.	White wagtail (Pied wagtail)	*Motacilla alba*	Mamola, Dhoban chidiya	4-50	50-150
222.	Citrine wagtail (Yellowheaded wagtail)	*Motacilla citreola*	Choti pilakh	4-15	not found
223.	Yellow wagtail	*Motacilla flava*	-do-	4-15	not found
	DICAEIDAE				
224.	Thickbilled flower-pecker	*Dicaeum agile*	Phulsoonghi	not found	50-100

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Appendix - I (Contd...)

Species and prices recorded in the Live Bird Trade in Northern India

S. No.	English name	Scientific name	Local trade name*	Prices at level I** (In Indian Rupees)	Prices at level II*** (In Indian Rupees)
	NECTARINIIDAE				
225.	Purple sunbird	*Nectarinia asiatica*	Kala shakarkhora, Phulchoghi	5-10	5-100
226.	Greentailed sunbird (Nepal yellowbacked)	*Aethopyga nipalensis*	Lal shakarkhora sunbird	10-25	20-150
	ZOSTEROPIDAE				
227.	Oriental white eye (White-eye)	*Zosterops palperbrosa*	Baboona	3-8	5-30
	PLOCEIDAE				
	Subfamily : Passerinae				
228.	House sparrow	*Passer domesticus*	Chida, Gauriya	1-5	3-20
229.	Eurasian tree sparrow (Tree sparrow)	*Passer montanus*	Sohan chida	not found	20-50
230.	Chestnut-shouldered petronia (Yellowthroated sparrow)	*Petronia xanthocolis*	Pahlwan chida, Banchida	1-3	2-10
	Subfamily : Ploceinae				
231.	Baya weaver (Baya)	*Ploceus philippinus*	Desi baya, baya	1-5	3-15

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Species and prices recorded in the Live Bird Trade in Northern India

S. No.	English name	Scientific name	Local trade name*	Prices at level I** (In Indian Rupees)	Prices at level II*** (In Indian Rupees)
232.	Yellow weaver (Finn's baya)	*Ploceus megarhynchus*	Bada baya, Pahadi baya	10-25	20-60
233.	Blackthroated weaver bird	*Ploceus benghalensis*	Chandwa baya, Momiya chonch ka baya	1-5	3-15
234.	Streaked weaver (Streaked weaver bird)	*Ploceus manyar*	Jalidar baya	1-5	3-15
	Subfamily : Estridinae				
235.	Red avadavat (Red munia)	*Estrilda amandava*	Lal, Lal muniya	1.50-10	3-40
236.	Green avadavat (Green munia)	*Estrilda formosa (Amandava formosa)*	Hara lal, Hari munia, Tiger finch	8-40	25-150
237.	Whitethroated silverbill (Whitethroated munia)	*Lochura malabarica*	Piddi, Chiddakka	1-3	2-10
238.	White-rumped munia (Whitebacked munia)	*Lonchura striata*	Makachin, Bengali finch	3-10	10-50
239.	Blackheaded munia	*Lonchura malacca*	Nakalnol, Nargis	2-6	5-25
240.	Scaly breasted munia (Spotted munia)	*Lonchura punctulata*	Doctor, Sinebaj Telia munia	2-4	3-10
241.	Java's sparrow (Captive bred) introduced	*Padda oryzivora*	Grey ramgora	not found	75-1150

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Appendix - I (Contd...)

Species and prices recorded in the Live Bird Trade in Northern India

S. No.	English name	Scientific name	Local trade name*	Prices at level I** (In Indian Rupees)	Prices at level II*** (In Indian Rupees)
	FRINGILLIDAE				
242.	European Goldfinch (Goldfinch)	*Carduelis carduelis*	Goldfinch	25-50	40-150
243.	Fire-fronted serin (Goldfronted finch)	*Serinus pusillus*	Choti Goldfinch	not found	50-150
244.	Yellow -breasted greenfinch (Himalayan greenfinch)	*Carduelis spinoides*	Chuniyabaya, Pilli canary	2-8	5-50
245.	Spectacled finch (Redbrowed finch)	*Callacanthis burtoni*	Chota ramgora	not found	200-500
246.	Scarlet finch	*Haematospiza sipahi*	Surakh ramgora, Ramgora	not found	300-1500
247.	Common rosefinch	*Carpodacus erythrinus*	Toothi	3-5	5-50
	EMBERIZIDAE				
248.	Blackheaded bunting	*Emberiza melanocephala*	Kali topi ka gaddam, Canary	2-5	5-40
249.	Redheaded bunting	*Emberiza bruniceps*	Gaddam, Bageri	1-4	5-25
250.	Crested bunting	*Melophus lathami*	Maukhiya	2-5	5-75

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APPENDIX - II

Exotic Species Recorded In Northern India

S.No.	English Name	Scientific Name	Origin
1.	Cut-throat finch*	*Amadina fasciata*	Africa
2.	Melba finch	*Pytilia melba*	Africa
3.	Yellow-bellied waxbill	*Estrilda melanotis*	Etthopia & Sudan
4.	Orange-cheeked waxbill	*Estrilda melpoda*	West Africa
5.	St. Helena waxbill	*Estrilda astrild*	Africa
6.	Red-tailed lavender	*Estrilda caerulescens*	West Africa
7.	Red-cheeked cordon bleu*	*Uraeginthus bengalus*	Central Africa
8.	Angola cordon bleu*	*Uraeginthus angolensis*	Southern Africa
9.	Violet-eared waxbill	*Granatina granalina*	Southern Africa
10.	Red billed fire finch	*Lagonoticta senegala*	Africa
11.	Green backed twin spot	*Mandingoa nitidula*	Africa
12.	Java sparrow*	*Padda oryzivora*	Indonesia
13.	Bengalense finch*	*Lonchura domestica*	Does not occur in wild
14.	Bicheno's finch	*Stizoptera bicrerovii*	Australia
15.	Zebra finch*	*Taeniopygia guttata*	Australia
16.	Parson or Black-throated finch	*Poephila cincta*	Australia
17.	Gouldian finch*	*Chloebia gouldiae*	North Australia
18.	Star finch	*Neochmia suficanda*	East Australia
19.	Diamond sparrow*	*Stagonoplura guttatia*	Central Australia
20.	Red-collared whydah	*Euplectes ardens*	Africa
21.	Pin-tailed whydah	*Vidua macroura*	Africa
22.	Domestic ringdove-albino*	*Streptopelia domesticus*	Not occuring in wild
23.	Diamond dove*	*Geopelia cuneata*	Australia
24.	Bourke's parrakeet*	*Neophema bourkii*	Australia
25.	Splendid grass parrakeet*	*Neophema splendida*	Australia
26.	Turquoise parrot*	*Neophema pulchella*	Australia
27.	Elegant grass parrakeet*	*Neophema elegans*	Australia
28.	Crimson or Pennant's rosella	*Platycercus elegans*	Australia
29.	Golden mantled rosella*	*Platycercus eximius*	Australia
30.	Brown's rosella	*Platycercus venustus*	Australia
31.	Red-rumped parakeet*	*Psephotus haemotonotus*	Australia
32.	Blue bonnet parrakeet	*Psephotus h. haematogaster*	Australia
33.	Princess of wales parrakeet*	*Polytelis alexandrine*	Australia
34.	Electus parrot*	*Electus roratus*	
35.	Peach-faced lovebird*	*Agapornis roseicollis*	Africa
36.	Masked lovebird*	*Agapornis personata personata*	Africa
37.	Fischer's lovebird*	*Agapornis personata fischeri*	Africa
38.	African grey parrot (two species)	*Psittacus erithacus*	Africa
39.	Senegal parrot*	*Poicephalus senegalus*	West Africa
40.	Meyer's parrot	*Poicephalus moyeri*	Africa
41.	Cockatiel*	*Nymphicus hollandicus*	Australia

Appendix - II (Contd...)

Exotic Species Recorded In Northern India			
S.No.	**English Name**	**Scientific Name**	**Origin**
42.	Greater sulphur-crested cockatoo	*Cacatua galerita*	Australia, New Guinea and Indonesia
43.	Lesser sulphur-crested cockatoo	*Cacatua sulphurea*	Sulawesi & Indonesia
44.	Umbrella cockatoo	*Cacatua alba*	Moluccas & Indonesia
45.	Moluccan cockatoo	*Cacatua moluccensis*	Moluccas & Indonesia
46.	Leadbeater's cockatoo	*Cacatua leadbeateri*	Australia
47.	Galah	*Cacatua roseicappilus*	Australia
48.	Blue and yellow macaw	*Ara ararawa*	South America
49.	Scarlet macaw	*Ara macao*	South America
50.	Green-winged macaw	*Ara chloroptera*	South America
51.	Military macaw*	*Ara militatis*	South America
52.	Illiger's macaw	*Ara maracana*	South America
53.	White-earned conure	*Pyrrhura leucotis*	South America
54.	Blue-fronted Amazon parrot	*Amazona aestiva*	South America
55.	Yellow-fronted Amazon parrot	*Amazona ochrocephala*	South America
56.	Blue headed parrot	*Pionus menstruus*	South America
57.	Red lory*	*Eos bornea*	
58.	Violet-necked lory	*Eos squamata*	
59.	Chattering lory*	*Lorius garrulus*	Indonesia
60.	Black-capped lory	*Lorius lorry*	
61.	Ornate lorikeet	*Tricho glossus arnatus*	Sulawesi & Indonesia
62.	Budgerigar*	*Melopsittacus undulatus*	Australia
63.	Golden pheasant*	*Chrysolophuo pictus*	China
64.	Silver pheasant*	*Lophura nycthemera*	China, Burma, Southeastern Asia.
65.	Lady Ahmersant pheasant*	*Chrysolophus amherstiae*	Tibet, Burma & China
66.	Nepal kaleej*	*Lophura leucomelana*	Bhutan, Nepal, Himalayas, Burma & Thailand
67.	Bleeding heart pigeon	*Gallieolumba luzouca*	Philippines
68.	Black swan*	*Cygnus atratus*	Australia
69.	Blacknecked swan	*Cygnus melanocoryphus*	Australia
70.	Mute swan	*Cygnus olor*	Australia
71.	Cassowary*		
72.	Canary*	*Domestic vareity*	Canary islands & Madeira
73.	Sugar bird	*Cyanerpes caeruleus*	South America

Species marked with a asterisk have been observed breeding in captivity during the survey. Majority of the exotic species listed are captive bred or domesticated forms.*

APPENDIX - III

Utilization Pattern of Trade Birds with Reference to Individual Species in Northern India

AV - Aviculture or pet use
TB - Table bird
ZO - Zoo trade
RL - Release trade
FL - Falconary or sport
ME - Medicinal use
BM - Black magic

English Name	Scientific Name	AV	TB	ZO	RL	FL	ME	BM
PODICIPEDIDAE								
Little grebe	*Tachybaptus ruficollis*		•					
PELECANIDAE								
Rosy pelican	*Pelecanus onocrotalus*	•	•	•				
ARDEIDAE								
Grey heron	*Ardea cinerea*		•	•				
Purple heron	*Ardea purpurea*		•	•				
Indian pond heron	*Ardeola grayii*		•		•			
Cattle egret	*Bubulcus ibis*		•		•			
Great egret	*Casmerodius albus*		•	•				
Intermediate egret	*Mesophoyx intermedia*		•	•				
Little egret	*Egretta garzetta*		•		•			
Black-crowned night heron	*Nycticorax nycticorax*		•	•				
CICONIIDAE								
Painted stork	*Mycteria leucocephala*	•	•	•				
Asian openbill	*Amastomus oscitans*	•	•	•				
Woolly-necked stork	*Ciconia episcopus*	•	•	•				
White stork	*Ciconia ciconia*	•		•				
Blacknecked stork	*Ephippiorhynchus asiaticus*	•	•	•				
THRESKIORNITHIDAE								
Blackheaded ibis	*Threskiornis melanocephalus*	•	•	•				
Eurasian spoonbill	*Platalea leucorodia*	•	•	•				
PHOENICOPTERIDAE								
Lesser flamingo	*Phoenicopterus minor*	•	•	•				
Greater flamingo	*Phoenicopterus ruber*	•	•	•				
ANATIDAE								
Greylag goose	*Anser anser*	•	•	•				
Barheaded goose	*Anser indicus*	•	•	•				
Lesser whistling -duck	*Dendrocygna javanica*	•	•	•				
Ruddy shelduck	*Tadorna ferruginea*	•	•	•				
Common shelduck	*Tadorna tadorna*	•	•	•				

Appendix - III (Contd...)

Utilization Pattern of Trade Birds with Reference to Individual Species in Northern India

English Name	Scientific Name	AV	TB	ZO	RL	FL	ME	BM
Northern pintail	*Anas acuta*	●	●	●				
Common teal	*Anas crecca*	●	●	●				
Spot-billed duck	*Anas poecilorhyncha*	●	●	●				
Mallard	*Anas platyrhynchos*	●	●	●				
Gadwall	*Anas strepera*	●	●	●				
Eurasian wigeon	Anas penelope	●	●	●				
Garganey	*Anas querquedula*	●	●	●				
Northern shoveller	*Anas clypeata*	●	●	●				
Redcrested pochard	*Netta rufina*	●	●	●				
Common pochard	*Aythya ferina*	●	●	●				
Tufted duck	*Aythya fuligula*	●	●	●				
Cotton pygmy-goose	*Nettapus coromandelianus*	●	●	●				
Comb duck	*Sarkidiornis melanotos*	●	●	●				
ACCIPITRIDAE								
Black-winged kite	*Elanus caeruleus*	●		●		●		
Oriental Honey-buzzard	*Pernis ptilorhyncus*			●		●		
Black kite	*Milvus migrans*			●		●		
Shikra	*Accipiter badius*	●		●	●	●		●
Buzzards	*Butea spp.*					●		
Pallid harrier	*Circus macrourus*			●		●		
Western Marsh harrier	*Circus aeruginosus*			●		●		
Eurasian tawny eagle	*Aquila vindhiana*					●		
Osprey	*Pandion haliaetus*			●		●		
FALCONIDAE								
Saker falcon	*Falco cherrug*			●		●		
Laggar falcon	*Falco jugger*			●		●		
Peregrine falcon	*Falco peregrinus*			●		●		
Shaheen falcon	*Falco peregrinus peregrinator*			●		●		
Red-necked falcon	*Falco chicquera*			●		●		
Common kestral	*Falco tinnunculus*			●		●		
PHASIANIDAE								
Chukar	*Alectoris chukar*	●	●	●				
Black francolin	*Francolinus francolinus*	●	●	●				
Grey francolin	*Francolinus pondicerianus*	●	●	●				
Swamp francolin	*Francolinus gularis*	●	●	●				
Rain quail	*Coturnix chinensis*	●	●					
Kaleej or Kalij, pheasant	*Lophura leucomelana*	●	●	●				
Red junglefowl	*Gallus gallus*	●	●	●				
Indian peafowl	*Pavo cristatus*	●	●	●			●	

AV *- Aviculture or pet use* ***TB*** *- Table bird* ***ZO*** *- Zoo trade* ***RL*** *- Release trade*
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Appendix - III (Contd...)

Utilization Pattern of Trade Birds with Reference to Individual Species in Northern India

English Name	Scientific Name	AV	TB	ZO	RL	FL	ME	BM
TURNICIDAE								
Yellowlegged button quail	*Turnix tanki*	●	●					
Barred buttonquail	*Turnix suscitator*	●	●					
GRUIDAE								
Common crane	*Grus grus*	●	●	●				
Sarus crane	*Grus antigone*	●	●	●				
Demoiselle crane	*Grus virgo*	●	●	●				
RALLIDAE								
Whitebreasted waterhen	*Amaurornis phoenicurus*		●					
Watercock	*Gallicrex cinerea*		●					
Common moorhen	*Gallinula chloropus*		●					
Purple swamphen	*Porphyrio porphyrio*	●	●	●				
Common coot	*Fulica atra*		●	●				
JACANIDAE								
Pheasant-tailed jacana	*Hydrophasianus chirurgus*		●					
Bronze winged jacana	*Metopidius indicus*		●					
ROSTRATULIDAE								
Greater painted snipe	*Rostratula benghalensis*		●					
RECURVIROSTRIDAE								
Blackwinged	*Himantopus himantopus*		●					
Pied avocet	*Recurvirostra avosetta*		●					
BURHINIDAE								
Eurasian thick-knee	*Burhinus oedicnemus*		●					
CHARADRIIDAE								
Sandpipers	*Tringa spp.*		●					
Whitetailed lapwing	*Vanellus leucurus*		●					
Redwattled lapwing	*Vanellus indicus*		●	●				
PTEROCLIDIDAE								
Chestnut-bellied sandgrouse	*Pterocles exustus*		●					
Painted sandgrouse	*Pterocles indicus indicus*		●					
COLUMBIDAE								
Yellow-footed green pigeon	*Treron phoenicoptera*	●	●	●				

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Appendix - III (Contd...)

Utilization Pattern of Trade Birds with Reference to Individual Species in Northern India

English Name	Scientific Name	AV	TB	ZO	RL	FL	ME	BM
Rock pigeon	*Columba livia*		●					
Eurasian collared-dove	*Streptopelia decaocto*		●					
Oriental turtle dove	*Streptopelia tranquebarica*		●					
Spotted dove	*Streptopelia chinensis*	●	●	●				
Laughing dove	*Streptopelia senegalensis*		●					
Emerald or Bronze winged dove	*Chalcophaps indica*	●		●				
PSITTACIDAE								
Alexendrine parakeet	*Psittacula eupatria*	●		●				
Roseringed parakeet	*Psittacula krameri*	●		●	●			
Red-breasted parakeet	*Psittacula alexandri*	●		●				
Plum-headed parakeet	*Psittacula cyanocephala*	●		●	●			
Slatyheaded parakeet	*Psittacula himalayana*	●		●	●			
Malabar parakeet	*Psittacula columboides*	●		●				
Vernal hanging-parrot	*Loriculus vernalis*	●		●				
CUCULIDAE								
Pied cuckoo	*Clamator jacobinus*	●			●			
Brainfever bird Common hawk cuckoo	*Cuculus varius*				●			
Indian cuckoo	*Cuculus micropterus*				●			
Asian koel	*Eudynamys scolopacea*	●		●	●			
Sirkeer malkoha	*Phaenicophaeus leschenaultii*	●	●					
Greater coucal	*Centropus sinensis*		●				●	
Lesser coucal	*Centropus bengalensis*		●				●	
STRIGIDAE								
Barn owl	*Tyto alba*			●			●	●
Eastern grass-owl	*Tyto longimembris*			●			●	●
Collared scops owl	*Otus lempiji*			●			●	●
Eurasian eagleowl	*Bubo bubo*			●			●	●
Dusky eagle owl	*Bubo coromandus*			●			●	●
Brown fish owl	*Ketupa zeylonensis*			●			●	●
Jungle owlet	*Glaucidium radiatum*			●			●	●
Asian barred owlet	*Glaucidium cuculoides*						●	●
Spotted owlet	*Athene brama*	●	●				●	●
CAPRIMULGIDAE								
Indian Nightjar	*Caprimulgus asiaticus*						●	
ALCEDINIDAE								
Pied kingfisher	*Ceryle rudis*				●			

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Appendix - III (Contd...)

Utilization Pattern of Trade Birds with Reference to Individual Species in Northern India

English Name	Scientific Name	AV	TB	ZO	RL	FL	ME	BM
Common kingfisher	*Alcedo atthis*	●			●			
Whitethroated kingfisher	*Halcyon smyrnensis*	●			●			
MEROPIDAE								
Bluetailed bee-eater	*Merops philippinus*				●			
Little green bee-eater	*Merops orientalis*				●			
CORACIIDAE								
Indian roller	*Coracias benghalensis*	●	●	●	●			
UPUPIDAE								
Eurasian Hoopoe	*Upupa epops*				●			
BUCEROTIDAE								
Indian grey hornbill	*Ocyceros birostris*		●	●			●	
Oriental pied hornbill	*Anthracoceros albirostris*		●	●			●	
Great hornbill	*Buceros bicornis*		●	●			●	
CAPITONIDAE								
Great barbet	*Megalaima virens*	●	●	●				
Brown-headed barbet	*Megalaima zeylanica*	●	●					
Coppersmith barbet	*Megalaima haemacephala*	●						
Blue-eared barbet	*Megalaima australis*	●						
PICIDAE								
Eurasian wryneck	*Jynx torquilla*						●	
Black-rumped flameback	*Dinopium benghalense*	●	●		●		●	
Yellow-crowned woodpecker	*Dendrocopus mahrattensis*	●			●			
PITTIDAE								
Indian pitta	*Pitta brachyura*	●						
ALAUDIDAE								
Indian lark	*Mirafra erythroptera*	●	●		●			
Ashycrowned sparrow-lark	*Eremopterix grisea*	●			●			
Greater short-toed lark	*Calandrella branchydactyla*	●	●		●			
Crested lark	*Galerida cristata*	●	●		●			
HIRUNDINIDAE								
Swallow	*Hirundo rustica*							●
Wiretailed swallow	*Hirundo smithii*							●

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Appendix - III (Contd...)

Utilization Pattern of Trade Birds with Reference to Individual Species in Northern India

English Name	Scientific Name	AV	TB	ZO	RL	FL	ME	BM
LANIDAE								
Northern shrike	*Lanius excubitor*	●			●			
Baybacked shrike	*Lanius vittatus*	●			●			
Long-tailed shrike	*Lanius schach*	●			●			
Brown shrike	*Lanius cristatus*	●			●			
ORIOLIDAE								
Eurasian golden oriole	*Oriolus oriolus*	●		●				
Blackhooded oriole	*Oriolus xanthornus*	●		●				
Marroon oriole	*Oriolus traillii*	●		●				
DICRURIDAE								
Black drongo	*Dicrurus macocercus*				●			
Greater racket-tailed drongo	*Dicrurus paradiseus*	●		●				
STURNIDAE								
Chestnut-tailed starling	*Sturnus malabaricus*	●		●				
Sub species	*Sturnus. m.blythii*	●		●				
Brahminy starling	*Sturnus pagodarum*	●			●			
Rosy starling	*Sturnus roseus*	●	●	●	●			
Common starling	*Sturnus vulgaris*	●	●		●			
Asian pied starling	*Sturnus contra*	●	●		●			
Common myna	*Acridotheres tristis*	●	●		●			
Bank myna	*Acridotheres ginginianus*	●	●		●			
Jungle myna	*Acridotheres fuscus*	●	●		●			
Lesser hill myna	*Gracula religiosa*	●		●				
Hill myna	*Gracula religiosa indica*	●		●				
CORVIDAE								
Eurasian jay	*Garrulus glandarius*	●	●					
Blackheaded jay	*Garrulus lanceolatus*	●	●					
Green magpie	*Cissa chinensis*	●	●	●				
Blue magpie	*Urocissa erythrorhyncha*	●	●	●				
Rufous tree pie	*Derndrocitta vagabunda*	●	●	●	●		●	
Grey tree pie	*Dendrocitta formosae*	●	●	●				
House crow	*Corvus splendens*				●		●	●
Jungle crow	*Corvus levaillantii*				●		●	●
CAMPEPHAGIDAE								
Scarlet minvet	*Pericrocotus flammeus*	●			●			
Small minvet	*Pericrocotus cinnamomeus*	●			●			

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Utilization Pattern of Trade Birds with Reference to Individual Species in Northern India

English Name	Scientific Name	AV	TB	ZO	RL	FL	ME	BM
IRENIDAE								
Common iora	*Aegithina tiphia*	●			●			
Golden-fronted leafbird	*Chloropsis aurifrons*	●		●				
Blue-winged leafbird	*Chloropsis cochinchinensis*	●		●				
Orangebellied leafbird	*Chloropsis hardwickii*	●		●				
PYCNONOTIDAE								
Black-crested bulbul	*Pycnonotus melanicterus flaviventris*	●						
Redwhiskered bulbul	*Pycnonotus jocosus*	●		●	●			
White-eared bulbul	*Pycnonotus leucotis*	●						
Himalayan bulbul	*Pycnonotus leucogenys*	●						
Redvented bulbul	*Pycnonotus cafer*	●		●	●			
Redvented bulbul	*P.c. bengalensis*	●						
Ashy bulbul	*Hemixos flavala*	●						
Black bulbul	*Hypsipetes leucocephalus*	●						
MUSCICAPIDAE								
Subfamily : Timalinae								
Indian-scimitar babbler	*Pomatorhinus horsfieldii*	●						
Yelloweyed babbler	*Chrysomma sinense*	●			●			
Common babbler	*Turdoides caudatus*		●		●			
Striated babbler	*Turdoides earlei*		●		●			
Jungle babbler	*Turdoides striatus*		●		●			
Whitethroated laughing thrush	*Garrulax albogularis*	●	●	●				
Striated laughingthrush	*Garrulax striatus*	●		●				
Whitecrested laughing thrush	*Garrulax leucolophus*	●		●				
Chestnut crowned laughing thrush	*Garrulax erythrocephalus*	●		●				
Silvereared mesia	*Leiothrix argentauris*	●		●				
Redbilled leiothrix or Pekin robin	*Leiothrix lutea*	●		●				
Chestnut tailed minla	*Minla strigula*	●						
Bluewinged minla	*Minla cyanouroptera*	●						
Whiskered yuhina	*Yuhina flavicollis*	●						
Blackchinned yuhina	*Yuhina nigrimenta*	●						
Whitebellied yuhina	*Yuhina xantholeuca*	●						
Rufous sibia	*Heterophasia capistrata*	●						
Subfamily : Muscicapinae								
Rufousbellied niltava	*Muscicapa sundara*	●						
Small niltava	*Niltava macgrigoridae*	●						

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Utilization Pattern of Trade Birds with Reference to Individual Species in Northern India

English Name	Scientific Name	AV	TB	ZO	RL	FL	ME	BM
Large niltava	*Niltava grandis*	•						
Verditer flycatcher	*Eumylas thalassina*	•						
Grey-headed canary-flycatacher	*Culicicapa ceylonensis*				•			
Paradise flycatcher	*Terpsiphone paradisi*	•			•			
Whitebrowed fantail flycatcher	*Rhipidura aurela*	•			•			
Subfamily : Sylvinae								
Ashy wren-warbler	*Prinia socialis*				•			
Subfamily : Turdinae								
Black redstart	*Phoenicurus ochruros*	•			•			
Whitecapped redstart	*Chaimarrornis leuecocephalus*	•						
Plumbeous redstart	*Rhyacornis fuliginosus*	•			•			
Stone chat	*Saxicola torquata*	•			•			
Pied bush chat	*Saxicola caprata*	•			•			
Indian robin	*Saxicoloides fulicata*	•			•			
Shama	*Copsychus malabaricus malabaricus*	•						
Magpie robin	*Copsychus saularis*	•			•			
Blue rock thrush	*Monticola solitarius*	•						
Blackbird	*Turdus merula*	•						
PARIDAE								
Great Tit	*Parus major*	•			•			
Greenbacked tit	*Parus monticolus*	•			•			
Blackthroated Tit	*Aegithalos concinnus*	•						
SITTIDAE								
Chestnutbellied nuthatch	*Sitta castanea*	•					•	
MOTACILLIDAE								
White-browed wagtail	*Motacilla maderaspatensis*	•			•			•
White wagtail	*Motacilla alba*	•			•			•
Citrine wagtail	*Motacilla citreola*	•	•		•			•
Yellow wagtail	*Motacilla flava*	•	•		•			•
DICAEIDAE								
Thickbilled flower-pecker	*Dicaeum agile*	•						

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Utilization Pattern of Trade Birds with Reference to Individual Species in Northern India

English Name	Scientific Name	AV	TB	ZO	RL	FL	ME	BM
NECTARINIIDAE								
Purple sunbird	*Nectarinia asiatica*	•			•			
Greentailed sunbird	*Aethopyga nipalensis*	•						
ZOSTEROPIDAE								
Oriental white eye	*Zosterops palperbrosa*	•			•			
PLOCEIDAE								
Subfamily : Passerinae								
House sparrow	*Passer domesticus*		•		•		•	
Eurasian tree sparrow	*Passer montanus*	•			•			
Chestnut-shouldered petronia	*Petronia xanthocolis*	•			•			
Subfamily : Ploceinae								
Baya weaver	*Ploceus philippinus*	•	•		•			
Yellow weaver	*Ploceus megarhynchus*	•		•				
Blackthroated weaver bird	*Ploceus benghalensis*	•	•		•			
Streaked weaver	*Ploceus manyar*	•	•		•			
Subfamily : Estridinae								
Red avadavat	*Amandava amandava*	•		•	•			
Green avadavat	*Amandava formosa*	•		•				
Whitethroated silverbill	*Lochura malabarica*	•		•	•			
White-rumped munia	*Lonchura striata*	•		•	•			
Blackheaded munia	*Lonchura malacca*	•		•	•			
Scaly breasted munia	*Lonchura punctulata*	•		•	•			
Java's sparrow	*Padda oryzivora*	•		•				
FRINGILLIDAE								
European goldfinch	*Carduelis carduelis*	•		•				
Fire-fronted serin	*Serinus pusillus*	•		•				
Yellow -breasted greenfinch	*Carduelis spinoides*	•		•	•			
Spectacled finch	*Callacanthis burtoni*	•		•				
Scarlet finch	*Haematospiza sipahi*	•		•				
Common rosefinch	*Carpodacus erythrinus*	•		•				
EMBERIZIDAE								
Blackheaded bunting	*Emberiza melanocephala*	•	•	•	•			
Redheaded bunting	*Emberiza bruniceps*	•	•	•	•			
Crested bunting	*Melophus lathami*	•		•				

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