

ORNITHOLOGICAL SURVEY
OF
CHITLANG FOREST

Submitted to
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by

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TABLE OF CONTENTS

| | | |
|-----|---------------------------------|----|
| 1. | ACKNOWLEDGEMENT | 1 |
| 2. | SURVEY, SUMMARY | 2 |
| 3. | OBJECTIVES OF STUDY | 2 |
| 4. | PARTICIPATION AND METHOD | 2 |
| 5. | SITE DESCRIPTION | 3 |
| 6. | VEGETATION AND WILDLIFE | 3 |
| 7. | CONSERVATION ACTIVITIES | 4 |
| 8. | CONSERVATION THREATS | 5 |
| | A) CHARCOAL PRODUCTION | 5 |
| | B) FOREST FIRE | 5 |
| | C) ROAD RENOVATION | 6 |
| | D) MILITARY TRAINING | 6 |
| | E) TUNNEL HIGHWAY | 6 |
| | F) OTHERS | 7 |
| 9. | CONCLUSIONS AND RECOMMENDATIONS | 7 |
| 10. | LIMITATION OF SURVEY | 8 |
| 11. | BIRD CHECKLIST OF CHITLANG AREA | 9 |
| 12. | REFERENCES | 13 |
| 13. | PHOTOGRAPHS | 14 |

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SURVEY SUMMARY

An ornithological survey was conducted in Chitlang area to assess the bird population and natural habitat and conservation activities. Chitlang area lying on the southern boundary of Kathmandu valley is an important forest for maintaining environmental balance in the valley.

The Survey team stayed in the vicinity of Chitlang village for 15 consecutive days in October and November and 5 days in April. The survey team observed 160 species of birds in Chitlang area of which 30 were thought to be at risk in Nepal (which is 19% of the total birds recorded here). The area has temperate forests very suitable for avifauna. But the forests are depleting fast posing a danger to bird life and environment as a whole. The team also identified major causes of deforestation and conservation threats that must be mitigated for sustainable vegetation.

The rapid urbanization of Kathmandu valley has grossly reduced the forest cover on the valley floor and surrounding forests. Without green coverage the valley would be subjected to drastic climate changes. Conservation of forests in the valley and surrounding area is only way for healthy and environmentally clean tomorrow. In this regard Chitlang area is very important forest to start with.

OBJECTIVES OF STUDY

The objectives of the survey can be summarized as following:

1. Conduct an ornithological survey of the area during mid-winter (for winter migrants) and spring season (for breeding birds).
2. Investigate threats to the forest habitats and bird population.

PARTICIPATION AND METHOD

The Ornithological Survey in Chitlang Area was conducted by three members of Nepal Bird Watching Club (NBWC), Mr. Rabindra Manandhar, Mr. Lalit J. Lalchan and Mr. Pravin Shrestha. Mr. Chandra Man Dongol joined the team for the survey of the vegetation. Local villagers were used as forest guides. The team carried out fieldwork from October 22 to November 7 and April 13 to April 17.

During both the visits, the Survey team was stationed in the vicinity of Chitlang village and all the possible hill slopes were covered to come up with possibly complete checklist of birds for those particular periods. However, the trails were the determining factor for the coverage pattern. The observation note was maintained on day-to-day basis for the preparation of the checklist.

Consultation and discussion were held with local people regarding the conservation activities in the area.

SITE DESCRIPTION

Chitlang is easily accessible through trails within 3 hours of walk from Thankot (Kathmandu). Chitlang river originates from Chandragiri range (El. 7950 ft) and later merges into Kulekhani reservoir at Markhu. Chitlang lies in the southern outer rim of the Kathmandu valley in the foot of Chandragiri range is in the Makawanpur district. It is bordered by Dhading district and Kathmandu district in the north, Chakhel village in the east, Markhu village in the south and in the west Palung village is located. The forest of Chitlang is located at a longitude of 85° 15' E and latitude of 27° 40' N. Prior to the construction of Tribhuvan Highway, the village was en route to Terai from Kathmandu. The village has a population of 6,417 in 1,086 households, according to the 1991 Census by Central Bureau of Statistics. The village core is dominated by Newar community, while other communities like Brahman, Chhetri, Tamang and others are distributed in the surrounding area.

Subsistence farming is the main economic activity of Chitlang village. The main crops are potatoes, maize, barley and mustard. In lower elevation, rice and vegetables like cauliflower, barley etc are raised. Only few people supply their harvest to Kathmandu.

The climate of Chitlang is some what similar to that of Kathmandu. The hottest month is July when the temperature reaches up to 30 °C or more. During autumn and spring the temperature varies from 12 °C to 20 °C. During the winter, the temperature goes drops to about 3 °C.

VEGETATION & WILDLIFE

Like in other forests situated in the hills of Central region, there is a natural zonation in accordance with the altitude. The highest elevation point of the forest is at an elevation of 7,950 ft and the lowest elevation point is in the southern aspect of hill slope with an elevation of 5,500 ft. Chitlang spreads over an area of about 35 sq km with temperate type of vegetation comprising of more than 30 species of broad leaved trees and shrubs. There are also various species of orchids, ferns and bamboos etc.

The forest lies mainly in Chitlang village. However, some portion of the forest is extended to adjoining Thankot and Chakhel villages of Kathmandu district.

Mixed forest of Oak-Rhododendron is common in the higher elevation. Other broad leaved species intermixed are Juglans regis, Lyonia spp., Michelia sps. with various types of orchids and shrubs growing as undergrowth. This forest yields resources such as fuel-wood, fodder and animal bedding. The domestic cattle are left to graze in this forest.

Southern drier aspect of the hill slope is dominated by isolated big patches of even aged blue pine forest with sparsely distributed oak trees and other shrubs. These big patches have very little undergrowth. This forest is the main source of timber for the villagers. The list of major species of vegetation is given below:

List of Vegetation

| <u>Botanical name</u> | <u>Local name</u> |
|--------------------------------|-------------------|
| <i>Juglans regia</i> | Okhar |
| <i>Rhododendron arborerium</i> | Guras |
| <i>Quercus lamellosa</i> | Phalat |
| <i>Quercus glanca</i> | Phalat |
| <i>Qerus lanta</i> | Banj |
| <i>Myrica esculenta</i> | Kaphal |
| <i>Michaulus odoratissima</i> | Kaulo |
| <i>Bhudhelia</i> | BhimsenPate |
| Loyanis | Angeri |
| <i>Myrsine semiserrata</i> | Kalikath |
| <i>Betula alnoides</i> | Saur |
| <i>Alnus nepaulensis</i> | Utish |
| <i>Pinus wallichiana</i> | Gobre salla |
| <i>Aacer oblong</i> | Phirphire |
| <i>Morus alba</i> | Kimbo |
| <i>Berberies aristata</i> | Chutro |
| <i>Mohania nepaulensis</i> | Mahnemandro |
| <i>Rhubus elepticus</i> | Aishelu |
| <i>Pyrus pashia</i> | Mel |
| <i>Princepia utilis</i> | Baklo Guras |
| <i>Pyrecantha crenulata</i> | Ghangaro |
| <i>Viburnum spp.</i> | Narbu |
| <i>Eleagnus lalsfolis</i> | Guyeli |
| <i>Daphe papyracea</i> | Laukat |
| <i>Cinamomum tamala</i> | Tej pat |

Among the wildlife, dominant species are Barking deer, Jungle cat, Orange bellied Himalayan Squirrel, Fruit-eating bat, Rufous backed hare, Common monkey etc. Various species of butterflies and insects were also observed in the forest.

CONSERVATION ACTIVITIES

Kulekhani hydro power station is an important source of electricity supply in Nepal. The power is generated from water stored in a big reservoir enabling the station to work as a peaking station. So storage of water is very important aspect of the power station. Chitlang river is one of the tributary entering into the reservoir. The fragile geological condition, forest destruction and population growth has tremendously aggravated the soil erosion in the catchment of the reservoir. Considering these factors, Department of Soil Conservation and Watershed Management, HMG/Nepal launched Kulekhani Watershed and

Conservation Education Project (KWCEP) in 1984. The main activities of the KWCEP are :

- * establishment of forest plantation,
- * road side stabilization,
- * landslide control,
- * terrace improvement,
- * range and pasture improvement,
- * tree gardening,
- * community development, and
- * raising awareness on firewood conservation.

The Project is running one nursery in Chitlang and had planted 50 ha of degraded land with pine in intermixed fodder trees. In addition, a number of smokeless stoves ("chulos") have been distributed in the area. From this fiscal year onwards, they are planning to train two women from each village in conservation education and will be sent to villages as motivators. They envisage that this will motivate the local people (especially women) in natural resource conservation and will focus on self help forestry.

CONSERVATION THREATS

The survey team during their stay in the area have identified a number of activities that cause forest destruction and pose a threat to the nature and her habitats. These are described in following paragraphs:

Charcoal Production

Charcoal production poses the main threat to the forest of the area. Oaks (*Castanopsis* and *Quercus*), *Lyonia* (local name - Angeri), *Rhododendron* (local name - Guras) and *Halayo* (local name) are the main tree species preferred for charcoal making. Charcoal is supplied to Kathmandu valley mainly to jewellery workshops. Charcoal pits surrounded by stumps were common sights in the forest trails. Smoke arising from many parts of the forest indicate the extent of this practice in the area. According to Water and Energy Commission, there are no authorized agency or private enterprise for production and distribution of charcoal on a commercial scale in Nepal. Although, there is a forest product check-post at Thankot, bags of charcoal are often brought through the other routes. According to the locals, there are no agencies to prevent or regularize charcoal making. Few conscious villagers had ventured once to prevent it, but that was not effective. Since this has been practiced for a very long time, most villagers do not want to stop this easy earning means.

Forest Fire

Forest fire is another major threat to the forest as well as to the habitats. The team witnessed a forest fire during breeding survey which went on for seven consecutive days. The fire burnt largely the undergrowth of the forest causing only little damage to the trees. About two-thirds of undergrowth were destroyed in the fire. However, the orchids, bamboos and old

trees were destroyed in the fire. How the fire got started at first is still a mystery. The fire also spreaded to some parts of blue pine forest. The villagers told that similar forest fire took place in 1989, but was not as big as the present one.

Road Renovation

The trail through Chitlang was constructed more than seventy years ago. Prior to the construction of Tribhuvan Highway joining Indian border with Kathmandu valley, this trail was the one of the major trade route. The supplies including vehicles for the Kathmandu valley were carried by the porters on their shoulders on this trail. The trail is still wide enough in many sections for a light vehicle to pass easily. However, in some sections landslides have made the trail inoperable for any class of vehicles. Presently, Department of Roads is undertaking renovation as well as widening of the trail for vehicles to operate up to Chitlang. Once the traffic is opened, there will be positive change in the economy of Chitlang, which has substantially decreased after the Tribhuvan Highway was constructed. But after the trail is completed, the area will be more prone to deforestation and soil erosion. It ultimately depends upon the Department of Forest and the local people, to maintain the healthy environment and preserve the nature for future generations.

Military Training

Since the winter of 1991, the forest of Chitlang has become a training centre for military personnel. Although the training was concentrated mainly in the periphery of forest, there were plenty of evidences of training in the deep forest. The training includes firing practices with light and heavy weapons, which disturbs the natural habitat with loud noises and echoes from surrounding hills. Throughout the training, local people were prevented from entering the forest. The training usually lasts for three successive months. A large number of temporary armories utilizing huge quantity of local forest resources were erected at places where a large number of birds particularly the migrants could be seen. The team was in Chitlang in mid-February to update the winter survey. After few days of observation, it was clear that migrant birds like Finches and others could not be sighted, where as the number of resident birds remained nearly the same. There were common belief that the migrant birds will return next year, which the team was not able to confirm.

Tunnel Highway

His Majesty's Government of Nepal is currently planning to link the capital city with Hetauda through tunnels. Though a detail survey has not yet been undertaken, a general survey showed that a tunnel through the Chandragiri range will shorten the distance from Kathmandu to Hetauda to 40 km instead of 90 km on existing highway. The construction is unlikely to be carried out without aid and loan grant from foreign financial institution or donor countries. If the construction goes ahead, it is obvious that the forest area will be greatly disturbed.

Others

Besides the above explained major threats to nature, some minor problems also exist but they are restricted to some parts of the village adjoining forest.

Fencing with logs to protect cultivated land from cattle is common practice resulting in more number of fell trees in the area. This practice can be checked with the help of motivators trained from the Kulekhani Watershed and Conservation Education Project and if, alternatives could be found and implemented properly, it will greatly help in maintaining the status of grown trees of the area.

Due to the population explosion and shortage of land, people are bound to clear the trees for far lands. Chitlang is no exception to this nation wide phenomenon. However, in some villages despite the constraint for extra income, some villagers having farms adjoining forest have not crossed the boundaries established by Department of Forest some decades ago, in order to expand their farms. It may be necessary once again to define the forest boundary, for which the villagers have high degree of respect.

CONCLUSIONS AND RECOMMENDATIONS

The present study tried to cover the entire bird species of Chitlang area for the particular periods. However, the possibilities of new bird record(s) of the region can not be ruled out due to migratory nature of birds.

The forest of Chitlang, which shelters not only a large number of species of avifaunas, but a large numbers of other floras and faunas, is very much essential to be managed firmly.

It is very urgent that Forest Offices of Kathmandu and Makawanpur districts act together utilizing their available resources. Their efforts will be further productive when local people are sought to participate. Depending upon the situation, an assistance from some Non Governmental Organizations involved in Forestry and Wildlife can also be sought.

The activities of Kulekhani Watershed and Conservation Education Project should be strengthened and more emphasis should be given to direct involvement of local people. Moreover, deterioration of forest resources means decline in Kulekhani reservoir's source. So it is necessary to monitor the forest conservation activities so that the deterioration do not catch up. It is suggested that the project should increase the number of motivators. The motivators should be trained to tackle the problem of fencing in Chitlang village.

The charcoal production , which is indiscriminatory in time and place should be restricted to particular season and place if not totally abolished. For this, patrolling by forest officials should be done time-to-time. Conservation education to the people is necessary for long term effects.

The forest boundary which still commands the respect of people in villages, needs redefining once again with the mutual understanding between the villagers and Forest Office of Makawanpur.

Forest fire occurs in many parts of Nepal during dry season, destroying precious resources. The causes of forest fire should be studied and preventive measures should be taken. Once the fire has started there should be means to extinguish fires.

LIMITATION OF THE SURVEY

Since the Survey was first of its kind for the NBWC, the team faced many difficulties during the survey period. However, it was gradually eliminated after consultation with several agencies and personnel. The team feels that such survey should be repeated in consecutive years for better assessment and annual variations. The team has relied on primary data and information for the most of the topics.

BIRD CHECKLIST OF CHITLANG AREA

| | | |
|----|--------------------------------------------------------------|-----|
| 1 | Pond Heron (<i>Areola grayii</i>) | C,R |
| 2 | Cattle Egret (<i>Bubulcus ibis</i>) | C,R |
| 3 | Intermediate Egret (<i>Egretta intermedia</i>) | U,V |
| 4 | Little Egret (<i>Egretta garzetta</i>) | C,R |
| 5 | Dark Kite (<i>Milvus migrans</i>) | C,R |
| 6 | Sparrow Hawk (<i>Accipiter nisus</i>) | C,W |
| 7 | Long-legged Buteo (<i>Buteo rufinus</i>) | C,W |
| 8 | Crested Serpent Eagle (<i>Spilornis cheela</i>) | C,R |
| 9 | Mountain Hawk Eagle (<i>Spizaetus nipalensis</i>) | U,R |
| 10 | Steppe Eagle (<i>Awuila nipalensis</i>) | C,W |
| 11 | Black Eagle (<i>Ictinaetus malayensis</i>) | C,R |
| 12 | Black Vulture (<i>Torgos calvus</i>) | U,M |
| 13 | Hen Harrier (<i>Circus cyaneus</i>) | C,M |
| 14 | Peregrine Falcon (<i>Falco peregrinus</i>) | U,W |
| 15 | Eurasian Kestrel (<i>Falco tinnunculus</i>) | C,R |
| 16 | Kalij Pheasant (<i>Lophura leucomelana</i>) | C,R |
| 17 | Woodcock (<i>Scolopax rusticola</i>) | C,M |
| 18 | Blue rock Pigeon (<i>Columba livia</i>) | C,R |
| 19 | Rufous Turtle Dove (<i>Streptopelia orientalis</i>) | C,M |
| 20 | Red Turtle Dove (<i>Streptopelia tranquebarica</i>) | C,S |
| 21 | Spotted Dove (<i>Streptopelia chinensis</i>) | C,R |
| 22 | Rose-ringed Parakeet (<i>Psttacula krameri</i>) | C,R |
| 23 | Eurasian Cuckoo (<i>Cuculus canorus</i>) | C,R |
| 24 | Indian Cuckoo (<i>Cuculus micropterus</i>) | C,S |
| 25 | Himalayan Cuckoo (<i>Cuculus saturatus</i>) | C,R |
| 26 | Large Green-billed Malkoha (<i>Rhopodytes trisis</i>) | C,S |
| 27 | Koel Cuckoo (<i>Eudynamys scolopacea</i>) | C,S |
| 28 | Barn Owl (<i>Tyto alba</i>) | C,R |
| 29 | Scops Owl (<i>Otus scops</i>) | C,R |
| 30 | Indian Roller (<i>Coracias benghalensis</i>) | U,V |
| 31 | Hoopoe (<i>Upupa epops</i>) | C,M |
| 32 | Great Himalayan Barb (<i>Megalaima virens</i>) | C,R |
| 33 | Blue-throated Barbet (<i>Megalaima asiatica</i>) | C,R |
| 34 | Black-naped Woodpecker (<i>Picus canus</i>) | C,R |
| 35 | Fulvousbreasted Pied Woodpecker (<i>Dendrocopos macei</i>) | C,R |
| 36 | Large White-rumped Swift (<i>Apus pacificus</i>) | U,R |
| 37 | Sand Martin (<i>Riparia paludicola</i>) | C,M |
| 38 | Barn Swallow (<i>Hirundo rustica</i>) | C,R |
| 39 | Black-headed Shrike (<i>Lanius schach</i>) | C,R |
| 40 | Gray-backed Shrike (<i>Lanius tephronotus</i>) | C,R |
| 41 | Brown shrike (<i>Lanius cristatus</i>) | C,W |
| 42 | Maroon Oriole (<i>Oriolus traillii</i>) | C,R |
| 43 | Ashy Drongo (<i>Dicurus leucophaeus</i>) | C,S |
| 44 | Black Drongo (<i>Dicrurus adsimilis</i>) | C,R |
| 45 | Gray-headed Myna (<i>Sturnus malabaricus</i>) | C,S |
| 46 | Common Myna (<i>Acridotheres tristis</i>) | C,R |
| 47 | Jungle Myna (<i>Acridotheres fuscus</i>) | C,R |
| 48 | Eurasian Jay (<i>Garrulus glandarius</i>) | C,R |
| 49 | Black-throated Jay (<i>Garrulus lanceolatus</i>) | U,R |
| 50 | Red-billed Blue Magpie (<i>Cissa erythrorhyncha</i>) | C,R |
| 51 | Himalayan Tree Pie (<i>Dendrocitta formosae</i>) | C,R |
| 52 | House Crow (<i>Corvus splendens</i>) | C,R |
| 53 | Jungle Crow (<i>Corvus macrorhynchos</i>) | C,R |
| 54 | Large Cuckoo-Shrike (<i>Coracina novaehollandiae</i>) | C,R |

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|----|---------------------------------------------------------------------|------|
| 55 | Dark Cuckoo-Shrike (<i>Coracina melaschistos</i>) | C, S |
| 56 | Long-tailed Minivet (<i>Percrocotus ethologus</i>) | C, R |
| 57 | Scarlet Minivet (<i>Pericrocotus flammeus</i>) | C, R |
| 58 | White-cheeked Bulbul (<i>Pycnonotus leucogenys</i>) | C, R |
| 59 | Striated Bulbul (<i>Pycnonotus striatus</i>) | U, R |
| 60 | Red-vented Bulbul (<i>Pycnonotus cafer</i>) | C, R |
| 61 | Rufous-bellied Bulbul (<i>Hypsipetes virescens</i>) | C, R |
| 62 | Gray Bulbul (<i>Hypsipetes madagascariensis</i>) | C, R |
| 63 | Rufous-necked Scimitar Babbler (<i>Pomatorhinus ruficollis</i>) | C, R |
| 64 | Rusty-cheeked Scimitar Babbler (<i>Pomatorhinus erythrogenys</i>) | C, R |
| 65 | Scaly-breasted Wren Babbler (<i>Pnepygia albiventer</i>) | C, R |
| 66 | Lesser Scaly-breasted Wren Babbler (<i>Pnoepyga pusilla</i>) | U, R |
| 67 | Black-chinned Babbler (<i>Stachyris pyrrhops</i>) | C, R |
| 68 | Black-throated Babbler (<i>Stachyris nigriceps</i>) | C, R |
| 69 | Nepal parrotbill (<i>Paradoxornis nipalensis</i>) | U, R |
| 70 | Streaked Laughing-Thrush (<i>Garrulax lineatus</i>) | C, R |
| 71 | White-throated Laughing-Thrush (<i>Garrulax albogularis</i>) | C, R |
| 72 | Striated Laughing-Thrush (<i>Garrulax striatus</i>) | C, R |
| 73 | Red-headed Laughing-Thrush (<i>Garrulax erythrocephalus</i>) | C, R |
| 74 | Black-faced Laughing-Thrush (<i>Garrulax affinis</i>) | C, R |
| 75 | Red-billed Leiothrix (<i>Leiothrix lutea</i>) | C, R |
| 76 | Red-winged Shrike Babbler (<i>Pteruthius flaviscapis</i>) | C, R |
| 77 | Yellow-naped Yuhina (<i>Yuhina flavicollis</i>) | C, R |
| 78 | Chestnut-headed Tit Babbler (<i>Alcippe castaneiceps</i>) | C, R |
| 79 | Nepal Babbler (<i>Alcippe nipalensis</i>) | C, R |
| 80 | Black-capped Sibia (<i>Heterophasia capistrata</i>) | C, R |
| 81 | Sooty Flycatcher (<i>Muscicapa sibirica</i>) | C, S |
| 82 | Orange-gorgetted Flycatcher (<i>Muscicapa strophitata</i>) | C, R |
| 83 | Little Pied Flycatcher (<i>Muscicapa westermanni</i>) | U, S |
| 84 | Slaty Blue Flycatcher (<i>Muscicapa leucomelanura</i>) | C, W |
| 85 | Beautiful Niltava (<i>Muscicapa sundara</i>) | C, R |
| 86 | Verditer Flycatcher (<i>Muscicapa thalassina</i>) | C, R |
| 87 | Yellow-bellied Fantail Flycatcher (<i>Rhipidura hypoxantha</i>) | C, R |
| 88 | White-throated Fantail Flycatcher (<i>Rhipidura albicollis</i>) | C, R |
| 89 | Gray-headed Flycatcher (<i>Culicicapa ceylonensis</i>) | C, R |
| 90 | Abberant Bush Warbler (<i>Cettia flavolivaceus</i>) | C, W |
| 91 | Rufous-capped Bush Warbler (<i>Cettia brunnifrons</i>) | C, R |
| 92 | Brown Hill Prinia (<i>Prinia criniger</i>) | C, R |
| 93 | Brown Leaf Warbler (<i>Phylloscopus collybita</i>) | C, M |
| 94 | Tickell's Leaf Warbler (<i>Phylloscopus affinis</i>) | C, M |
| 95 | Dusky Leaf Warbler (<i>Phylloscopus fuscatus</i>) | U, M |
| 96 | Gray-faced Leaf Warbler (<i>Phylloscopus maculipennis</i>) | U, R |
| 97 | Dull Green Leaf Warbler (<i>Phylloscopus trochiloides</i>) | C, W |
| 98 | Largebilled Leaf Warbler (<i>Phylloscopus magnirostris</i>) | U, S |
| 99 | Plain Leaf Warbler (<i>Phylloscopus inornatus</i>) | C, W |

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|-----|----------------------------------------------------------------|------|
| 100 | Orange-barred Leaf Warbler (<i>Phylloscopus pulcher</i>) | C, R |
| 101 | Yellow-rumped Leaf Warbler (<i>Phylloscopus proregulus</i>) | C, R |
| 102 | Crowned Leaf Warbler (<i>Phylloscopus reguloides</i>) | C, R |
| 103 | Yellow-eyed Warbler (<i>Seicercus burkii</i>) | C, R |
| 104 | Gray-headed Warbler (<i>Seicercus xanthoschistos</i>) | C, R |
| 105 | Yellow-bellied Warbler (<i>Abroscopus superciliaris</i>) | U, S |
| 106 | Black-faced Warbler (<i>Abroscopus schisticeps</i>) | U, R |
| 107 | Goldcrest (<i>Regulus regulus</i>) | U, W |
| 108 | Himalayan Rubythroat (<i>Erithacus pectoralis</i>) | C, M |
| 109 | Orange-flanked Bush Robin (<i>Erithacus cyanurus</i>) | C, R |
| 110 | Golden Bush Robin (<i>Erithacus chrysaeus</i>) | U, W |
| 111 | Magpie Robin (<i>Copsychus saularis</i>) | C, R |
| 112 | Black Redstart (<i>Phoenicurus ochruros</i>) | C, M |
| 113 | Hodgson's Redstart (<i>Phoenicurus hodgsoni</i>) | U, W |
| 114 | Blue-fronted Redstart (<i>Phoenicurus frontalis</i>) | C, W |
| 115 | White-capped River Chat (<i>Chaimarrornis leucocephalus</i>) | C, R |
| 116 | Plumbeous Redstart (<i>Rhyacornis fuliginosus</i>) | C, R |
| 117 | Spotted Forktail (<i>Enicurus maculatus</i>) | C, R |
| 118 | Collared Bush Chat (<i>Saxicola torquata</i>) | C, R |
| 119 | Dark-gray Bush Chat (<i>Saxicola ferrea</i>) | C, R |
| 120 | Pied Bush Chat (<i>Saxicola caprata</i>) | C, R |
| 121 | Chestnut-bellied Rock Thrush (<i>Monticola rufiventris</i>) | C, R |
| 122 | Blue Rock Thrush (<i>Monticola solitarius</i>) | U, R |
| 123 | Pied Ground Thrush (<i>Zoothera wardii</i>) | U, S |
| 124 | Orange-headed Ground Thrush (<i>Zoothera citrina</i>) | C, S |
| 125 | Speckled Mountain Thrush (<i>Zoothera dauma</i>) | C, W |
| 126 | Gray-winged Blackbird (<i>Turdus boulboul</i>) | C, S |
| 127 | Whistling Thrush (<i>Myiophoneus caeruleus</i>) | C, R |
| 128 | Black-throated Thrush (<i>Turdus ruficollis</i>) | C, M |
| 129 | Gray Tit (<i>Parus major</i>) | C, R |
| 130 | Green-backed Tit (<i>Parus monticolus</i>) | C, R |
| 131 | Yellow-cheeked Tit (<i>Parus xanthogenys</i>) | C, R |
| 132 | Red-headed Tit (<i>Aegithalos concinnus</i>) | C, R |
| 133 | Chestnut-bellied Nuthatch (<i>Sitta castanea</i>) | C, R |
| 134 | Velvet-fronted Nuthatch (<i>Sitta frontalis</i>) | C, R |
| 135 | White-tailed Nuthatch (<i>Sitta himalayensis</i>) | C, R |
| 136 | Nepal Tree Creeper (<i>Certhia nipalensis</i>) | C, R |
| 137 | Hodgson's Tree Pipit (<i>Anthus hodgsoni</i>) | C, M |
| 138 | Upland Pipit (<i>Anthus sylvanus</i>) | C, R |
| 139 | Paddyfield Pipit (<i>Anthus novaeseelandiae</i>) | C, R |
| 140 | Rose-breasted Pipit (<i>Anthus roseatus</i>) | C, R |
| 141 | Gray Wagtail (<i>Motacilla caspica</i>) | C, M |
| 142 | Pied Wagtail (<i>Motacilla alba</i>) | C, M |
| 143 | Yellow-bellied Flowerpecker (<i>Dicaeum melanozanthum</i>) | U, R |
| 144 | Fire-breasted Flowerpecker (<i>Dicaeum ignipectus</i>) | C, R |
| 145 | Fire-tailed Sunbird (<i>Aethopyga ignicauda</i>) | C, R |
| 146 | Nepal Sunbird (<i>Aethopyga nipalensis</i>) | C, R |
| 147 | Black-breasted Sunbird (<i>Aethopyga saturata</i>) | U, R |
| 148 | White-eye (<i>Zosterops palpebrosa</i>) | C, R |
| 149 | House Sparrow (<i>Passer domesticus</i>) | C, R |
| 150 | Tree Sparrow (<i>Passer montanus</i>) | C, R |
| 151 | Red Munia (<i>Estrilda amandava</i>) | U, V |

| | | |
|-----|-----------------------------------------------------|------|
| 152 | Spotted Munia (<i>Lonchura punctulata</i>) | C, S |
| 153 | Himalayan Goldfinch (<i>Carduelis carduelis</i>) | C, R |
| 154 | Common Rose Finch (<i>Carpodacus erythrinus</i>) | C, W |
| 155 | Nepal Rose Finch (<i>Carpodacus nipalensis</i>) | C, W |
| 156 | Scarlet Finch (<i>Haematospiza sipahi</i>) | U, W |
| 157 | Yellow-breasted Bunting (<i>Emberiza aureola</i>) | C, W |
| 158 | Gray-headed Bunting (<i>Emberiza fucata</i>) | U, M |
| 159 | Little Bunting (<i>Emberiza pusilla</i>) | C, W |
| 160 | Crested Bunting (<i>Melophus lathami</i>) | C, R |

Legends

| | | |
|---|-------|----------------|
| C | | Common |
| U | | Uncommon |
| R | | Resident |
| M | | Migrant |
| W | | Winter Migrant |
| S | | Summer Visitor |
| V | | Vagrant |

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Photo 1: Depleting Forest with Shrubs.
(Chitlang Area)



Photo 2: South facing Slope showing
remaining Good Forest.



Photo 3: Charcoal Specimens produced in
Chitlang Forest



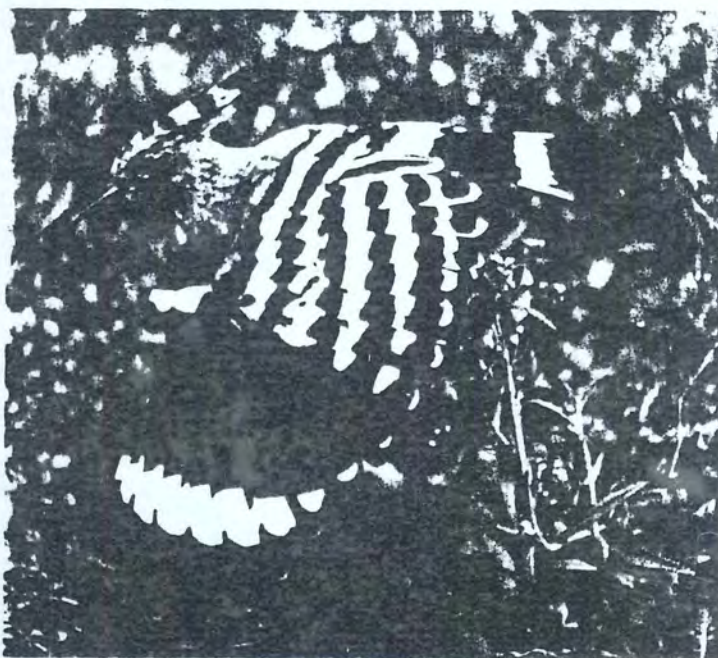
Photo 4: Smokes Arising from Forest Fire.



Photo 5: Way to Survival or Destruction?
(Collection of Fuelwood by Villagers)

ORNITHOLOGICAL SURVEY OF CHITLANG FOREST

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