

Birds of oak forests in the Kumaon Himalaya, Uttar Pradesh, India

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We surveyed 19 patches of oak forests in three districts of the Kumaon Himalaya to document the status of birds from April 1995 to July 1997. Totals of 203, 85 and 84 species of birds were recorded by using species richness counting, point counts and line transect methods respectively. Totals of 182, 81 and 162 bird species were recorded from Almora, Nainital and Pithoragarh districts respectively. These, together with records from other relevant published sources, have been combined to produce a checklist of 382 bird species for the Kumaon Himalaya. It is recommended that further surveys should be conducted in Almora and Nainital districts.

INTRODUCTION

The oak forests in the Kumaon Himalaya, Uttar Pradesh have been studied in detail by plant ecologists (Saxena and Singh 1982, Saxena *et al.* 1985, Singh and Singh 1986). However, very little current information exists on major animal communities (e.g. avian, mammalian etc.) which inhabit oak forests in the Kumaon Himalaya. Therefore, we carried out extensive surveys in extant oak patches to document the status of birds from April 1995 to July 1997.

STUDY AREA

The surveys were conducted in three districts i.e. Almora, Nainital and Pithoragarh of the Kumaon Himalaya ($28^{\circ}43'55''$ and $30^{\circ}30'12''N$ latitude and $78^{\circ}44'30''$ and $80^{\circ}45'E$ longitude). We covered 19 oak patches of different sizes during these surveys (Fig. 1) between an altitudinal range of 1,200 to 3,500 m (Table 1). The Kumaon Himalaya are mountainous and divisible into subtropical (300 to 1,500 m), temperate (1,500 to 3,500 m) and alpine (>3,500 m) zones (Saxena

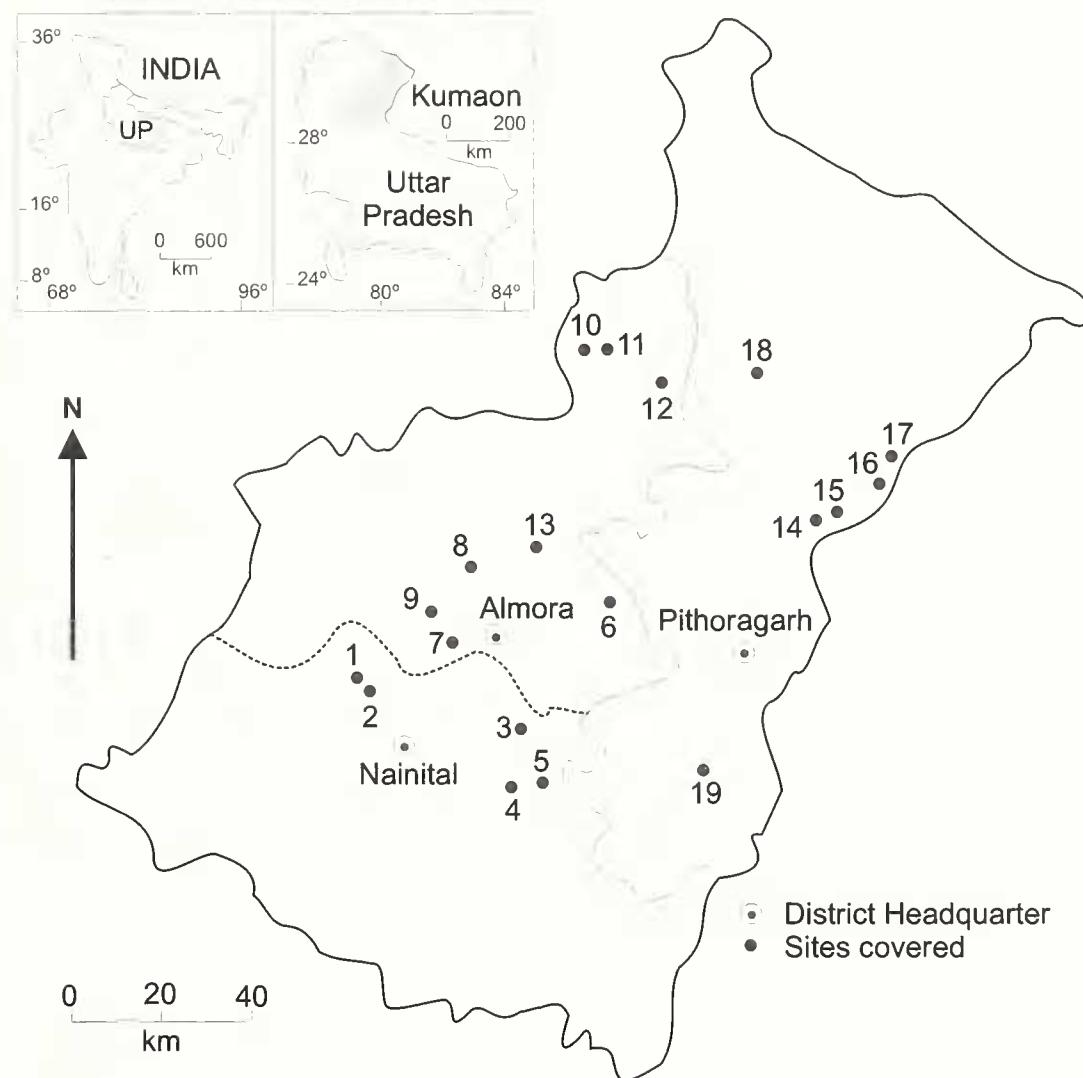


Figure 1. Location of sites covered during surveys in the Kumaon Himalaya (for site names, see Table 1)

Table 1. Sites covered during bird surveys in the Kumaon Himalaya

Site name	Code	Patch size	Altitudinal range
Naini Tal			
Kunjakharkar	1	14.5	1900-2500
Vinayak	2	15.32	1900-2400
Mukteshwar	3	11.75	1500-2400
Gager	4	3.25	1700-2300
Maheshkhan	5	22	1900-2300
Almora			
Jageshwar	6	21	1800-2300
Sitlakhet	7	11.25	1700-2200
Pandavkholi	8	13.23	1800-2500
Ranikhet	9	3	1880-2100
Sundardunga	10	25.75	2500-3500
Pindari	11	21.5	2500-3500
Lahur	12	49.5	2100-3000
Binsar	13	11.25	1600-2500
Pithoragarh			
Dhaphiadhwara	14	34.36	1200-2500
Majhtham	15	25	1300-3200
Duku	16	52	1290-2700
Sobala	17	28.12	1900-3500
Munsiyari	18	30.5	2300-3000
Mechh	19	23.25	1800-2200

et al. 1985). The vegetation in the Kumaon Himalaya is predominantly forest, and mostly belongs to moist temperate type (Champion and Seth 1968). There are five main forest types found in the whole of the Kumaon Himalaya. These are sal forests (found up 1,200 m), pine forests (1,200-2,400 m), oak forests (1,300-3,200 m), mixed broadleaf forest (foothills to 3,300 m) and *Betula utilis* forest (3,200-3,500 m). The major tree species found in different sites included *Quercus leucotrichophora*, *Q. lanata*, *Q. floribunda*, *Q. semecarpifolia*, *Tsuga dumosa* and *Rhododendron arboreum*, in association with *Viburnum* species, *Myrica esculenta*, *Alnus nepalensis*, *Swida oblonga*, *Lyonia ovalifolia*, *Persea duthiei* and *Lindera pulcherrima*. The dominant shrub species were *Myrsine africana*, *Arundinaria* species, *Berberis aristata*, *Rubus* species, *Daphnae* species, *Mahonia nepalensis* and *Pyracantha* species.

METHODOLOGY

Sampling of birds

The sampling of bird communities was initiated in Ranikhet region in the pre-monsoon season of 1995, followed by a survey and intensive study in the Binsar Wildlife Sanctuary in Almora district in the pre-monsoon season of 1996. During the post-monsoon season of 1996, surveys were carried out in the Askot Wildlife Sanctuary in Pithoragarh district, and these were followed by surveys in the whole of the Kumaon Himalaya during the pre-monsoon season of 1997.

The species richness counting method (MacKinnon and Phillipps 1993), point count method (Bibby et al. 1992) and line transect method (Emlen 1971) were used for sampling birds in oak patches. The study was initiated in Ranikhet where 21 points were established in oak forest. The points were randomly established, with a minimum interval of 100-150 m and were monitored

from 07h00-08h30 in the morning and 16h00-17h30 in the evening. Bird species were recorded within a radius of 20 m. This was followed by sampling of birds by line transect and species richness counting methods in the Binsar Wildlife Sanctuary. Six line transects, each 500 m in length and 500 m apart, were monitored from 07h00-09h00 to census the birds. There were nine monitoring sessions of each transect. A total of 71 bird lists were compiled in Binsar using the species richness counting method. Each list consisted of only 20 consecutive different bird species seen. No species was included more than once on each list. This was followed by the sampling of the bird communities in five oak patches of the Askot Wildlife Sanctuary, using the species richness counting method, and a total of 54 bird lists were compiled.

During surveys in the pre-monsoon season of 1997, birds were sampled by monitoring of 121 points and by compiling 110 lists in different localities of the Kumaon Himalaya. The points were established randomly at each site and monitored for 20 minutes only as more than one point was monitored per day. Birds were counted within a fixed radius of 20 m. The points were separated by a minimum distance of at least 100 m. At each point, data were collected on the following parameters:

1. Bird species
2. Group size, sex (if identifiable)
3. Radial distance and vertical distance
4. Activity
5. Tree species
6. Portion of the tree which was used by bird (upper canopy, middle canopy, lower canopy, stem) and ground

Data analysis

The total number of species for each site was calculated by adding the number of different species cumulatively from either point counts or from different lists compiled in the area. All bird records from point counts, line transect monitoring and species lists were pooled together to prepare a combined checklist for all surveyed sites. All individual sightings of birds were pooled for each locality and bird species were ranked according to following abundance categories:

- 1 = rare (0-5 sightings)
- 2 = common (6-25 sightings)
- 3 = abundant (26-50 sightings)
- 4 = very abundant (>50 sightings)

The species abundance scores for each site were summed together to calculate mean rank abundance score for a species reflecting its overall abundance for the Kumaon Himalaya. The values of mean rank abundance varied between 0 to 2.5. The total number of bird species were also classified according to their feeding guild and status following Ali and Ripley (1987), using the guild classification suggested by Karr (1971).

RESULTS

Table 2 provides the number of bird species sampled by different methods. A total of 203, 85 and 84 species

Table 2. The number of species recorded at different sites in the Kumaon Himalaya by different sampling methods

Sites	SRCM		PC		LT	
	N	NS	N	NS	N	NS
Nainital						
Kunjakharkar	4	39	8	22		
Vinayak	3	35	8	12		
Mukteshwar	4	42	8	21		
Gager	3	39	4	13		
Maheshkhan	5	49	8	29		
Total	19	78	36	35		
Almora						
Jageshwar	11	70	9	34		
Sitlakhet	5	57	4	21		
Pandavkholi	3	44	4	15		
Ranikhet	-	-	78	62		
Sundardunga	18	108	4	7		
Pindari	8	73	12	22		
Lahur	6	53	8	22		
Binsar	71	154	-	-	54	84
Total	122	185	119	75	54	84
Pithoragarh						
Dhaphiadhwara	34	111	8	28		
Majhtham		4	49	9	29	
Duku	9	86	6	16		
Sobala	31	117	12	20		
Munsiyari	5	58	4	14		
Mechh	3	41	4	9		
Total	86	160	43	40		
Overall total	254	203	198	85	54	84

SRM = Species richness counting method, PC = Point count, LT = Line transect, N = Number of bird lists, points or transects, NS = Number of bird species

Table 3. The bird species sampled in different districts of the Kumaon Himalaya according to their feeding guild

District	I	G	F	O	C	N
Nainital	51	4	4	10	6	3
Almora	110	15	11	25	19	5
Pithoragarh	103	9	10	19	15	4
Overall total	119	18	14	28	19	5

Table 4. Bird species according to their status in three districts of the Kumaon Himalaya

District	R	RM	M	V
Nainital	65	10	3	-
Almora	151	26	8	-
Pithoragarh	130	23	7	-
Overall	166	27	10	-

R = Resident, R/M = Resident/migratory, M = Migrant, V = Vagrant

were sampled by compiling 254 bird lists, monitoring of 198 points and 54 line transects in three districts of the Kumaon Himalaya, respectively. A total of 197 species and other casual records of birds have been combined to produce a comprehensive checklist of 222 bird species, along with information on altitude, status and mean abundance values of each species for the whole of the Kumaon Himalaya (Appendix).

Table 3 provides the classification of 197 bird species according to their feeding guilds. The highest number (58.6%) of birds belonged to the insectivorous guild and the lowest number (2.4%) to the nectarivorous guild in the bird community in the Kumaon Himalaya. At district level the contribution of insectivorous birds varied slightly and was highest in Almora district (65.3%) and lowest in Pithoragarh district (59.4%). The birds were also classified according to their status in the Kumaon Himalayas (Table 4). The contribution of resident birds was maximum (81.7%) in the community and it varied very little between the three districts.

DISCUSSION

The Kumaon Himalaya have been explored relatively poorly as far as bird communities are concerned. There are about 55 published accounts of birds from the Kumaon Himalayas. The most important of these were those by Hudson (1930), who documented 124 bird species occurring on seven hills around Nainital between 6,000 and 8,500 ft; Briggs (1931), who documented 83 bird species in Ranikhet forest, and Tak (1995), who documented 127, 94 and 82 species of birds from Nainital, Almora and Pithoragarh districts respectively.

The present study covered the same area in Ranikhet, as well as the same period of the year as that of Briggs (1931), who also observed the birds in the Cantonment forests lying between Chobatia and Dhobi Ghat Nullah in Ranikhet. We have compared the birds recorded in the present study with that of Briggs (1931) for Ranikhet forest only. Out of 83 birds recorded in 1931 and 114 birds in 1995, there are 68 common species, 15 species are exclusive to 1931 and 46 species were recorded only in 1995. The exclusive birds in 1931 include the Golden Eagle *Aquila chrysaetos*, Collared Falconet *Microhierax caerulescens*, Velvet-fronted Nuthatch *Sitta frontalis* and Long-billed Vulture *Gyps indicus*. It is surprising that many species found to be quite common in Ranikhet in 1995, such as Grey-headed Woodpecker *Picus canus*, Lesser Yellownape *P. chlorolophus*, and four leaf warblers *Phylloscopus* were not found at all by Briggs (1931). Briggs made observations on birds for a period of 42 days only, and it is likely that he missed many species that we recorded in our sampling. We feel that more work is required in the Kumaon Himalaya, especially in Nainital and Almora districts for a more comprehensive comparison of status of several species such as Cheer Pheasant *Catreus wallichii* and Himalayan Monal *Lophophorus impejanus*.

One of the major objectives of our two years study on the bird communities was to evaluate the different sampling methods. The line transect (Emlen 1971) and point count methods (Bibby *et al.* 1992) have been used very extensively to sample bird communities. We initially thought of using the line transect method in the Kumaon Himalaya, considering its robustness and ease in computation. However, there were no previous studies providing an indication of the efficiency of the method in sampling birds, except our own efforts in Ranikhet, where birds were sampled by using point counts as well as the line transect method, in 1995. We compared the proportion of birds sampled on point counts as well as

on line transects with that of our checklist of birds of Ranikhet based on random searches. A maximum of approximately 60% of birds was sampled by both methods and there was no significant difference in the number of birds sampled by point and line transects ($P>0.05$). Carol Inskip (pers. comm.) suggested the use of the species richness counting method for further surveys. This method emerged as the most efficient method of sampling bird populations based on the number of bird species recorded per unit effort compared to point counts and line transect methods. Therefore, we recommend use of the species richness counting method for sampling the birds in general ornithological surveys in the Himalayas.

The unequal sampling of birds by different methods at different sites does not allow any rigorous treatment of differences in species richness of each site. We believe a majority of sites such as Pindari in Almora and Kunjakharak in Nainital still require intensive sampling of bird communities. Considering this, further surveys are recommended in these regions.

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APPENDIX

Bird species recorded in Kumaon during surveys from 1995-1997 and by other authors

SPECIES	Altitudinal range (m) (1995-1997 surveys)	Almora		Nainital		Pithoragarh	
		Localities	Other refs	Localities	Other refs	Localities	Other refs
CHUKAR <i>Alectoris chukar</i>	1800	Wacchum		1, S		T&S	
BLACK FRANCOLIN <i>Francolinus francolinus</i>	1600-1800	3, 10	B, T, W	H, I, K&S, M, R, T		2	An, T, T&S
HILL PARTRIDGE <i>Arborophila torqueola</i>	2000-2400	3,,11, 12,14	N	18	H, I, K&S, T, Y	2,5-7	
HIMALAYAN QUAIL <i>Ophrysia superciliosa</i>		Gray		K&S			
WESTERN TRAGOPAN <i>Tragopan melanocephalus</i>		Gray					
SATYR TRAGOPAN <i>Tragopan satyra</i>	2800-3100	6		I			
KOKLA'S PHEASANT <i>Pucrasia macrolopha</i>	1800-2600	3,6,14	G&H, Gr, L, T, W	H, I, K&S, M, T, Y, Yo		2,8	Br, T
HIMALAYAN MONAL <i>Lophophorus impejanus</i>	2600-3200	6	T, W	I, T		T	
RED JUNGLEFOWL <i>Gallus gallus</i>		T		H, T		Br, T	
KALIJ PHEASANT <i>Lophura leucomelanos</i>	1800-2500	3,6,10-12, 14,15	Ah, O, T, W	1,13, 16-18	Ahm, H, I, K&S, Si, T, Y, Yo	2-9	Br, T, T&S
CHEER PHEASANT <i>Catreus wallichii</i>	2500	11	Ha, II, W		H, I, K&S, Ra, T, Yo		

SPECIES	Altitudinal range (m)	Locality	Almora Other refs	Nainital Other refs	Pithoragarh Other refs
INDIAN PEAFOWL <i>Pavo cristatus</i>			T	T	T
MALLARD <i>Anas platyrhynchos</i>				H, T	
SPECKLED PICULET <i>Picumnus innominatus</i>	2200		G	K&S	5
GREY-CAPPED PYGMY WOODPECKER <i>Dendrocopos canicapillus</i>			W	K&S	T
BROWN-FRONTED WOODPECKER <i>Dendrocopos auriceps</i>	1800-2200	3,,10, 11,14	Br, G, T, W	16,17	H, K&S, M, Sr, T
FULVOUS-BREASTED WOODPECKER <i>Dendrocopos macei</i>				K&S	
YELLOW-CROWNED WOODPECKER <i>Dendrocopos malhrattensis</i>			B, T	K&S	
RUFOUS-BELLIED WOODPECKER <i>Dendrocopos hyperythrus</i>	2100-2700	3,6,11,15	G, W	1,13,16,17	Ah, Br, K&S, O
HIMALAYAN WOODPECKER <i>Dendrocopos himalayensis</i>	1800-2100	3,6,10-12, 14,15	Br, G, T, W	13,17	Ah, Br, H, I, K&S, Si, Sr
RUFOUS WOODPECKER <i>Celeus brachyurus</i>				K	
LESSER YELLOWNAPE <i>Picus chlorolophus</i>	1800-2200	3,19	G		K&S
GREATER YELLOWNAPE <i>Picus flavinucha</i>	1700-2400	3,8		Ko, K&S	2,8
STREAK-THROATED WOODPECKER <i>Picus xanthopygaeus</i>			O	K&S	T
SCALY-BELLIED WOODPECKER <i>Picus squamatus</i>	1800-2400	3,10,11, 14,19	G, T, W		H, K&S, M, Sr, T
GREY-HEADED WOODPECKER <i>Picus canus</i>	1800-2500	3,10-12, 14	G, W	16-18	K&S
BLACK-RUMPED FLAMEBACK <i>Dinopium benghalense</i>					T
GREATER FLAMEBACK <i>Chrysocolaptes lucidus</i>			W	K&S	
GREAT BARBET <i>Megalaima virens</i>	1800-2600	3,6,10, 11,19	B, G, T, W	1,16,18	Ah, H, I, K&S, Si, Sr, T, Y
BROWN-HEADED BARBET <i>Megalaima zeylanica</i>				M	T
LINEATED BARBET <i>Megalaima lineata</i>				K&S	
BLUE-THROATED BARBET <i>Megalaima asiatica</i>	2100		W	K&S	4
COPERSMITH BARBET <i>Megalaima haemacephala</i>				S	T
INDIAN GREY HORNBILL <i>Ocyceros birostris</i>				K&S	
GREAT HORNBILL <i>Buceros bicornis</i>				H	
COMMON HOPOE <i>Upupa epops</i>	1800-2200	3,11,14	Br, T, W	M, Si, Sr, T	8,9
INDIAN ROLLER <i>Coracias benghalensis</i>	800				Jauljivi
DOLLARBIRD <i>Eurystomus orientalis</i>			W	Sh	
COMMON KINGFISHER <i>Alcedo atthis</i>			W	H, M	
WHITE-THROATED KINGFISHER <i>Halcyon smyrnensis</i>	1000	Salyani	T	H, M, Sr	T&S
CRESTED KINGFISHER <i>Megaceryle lugubris</i>			W	H, I, T	T, T&S
PIED KINGFISHER <i>Ceryle rudis</i>	12300			M	
BLUE-BEarded BEE-EATER <i>Nyctyornis athertonii</i>				K&S	
GREEN BEE-EATER <i>Merops orientalis</i>				M, S	T
CHESTNUT-HEADED BEE-EATER <i>Merops leschenaultii</i>	2100			Si	9
PIED CUCKOO <i>Clamator jacobinus</i>			Br, W		
CHESTNUT-WINGED CUCKOO <i>Clamator coromandus</i>				I	

SPECIES	Altitudinal range (m)	Almora		Nainital		Pithoragarh	
		Localities	Other refs	Localities	Other refs	Localities	Other refs
LARGE HAWK CUCKOO <i>Hierococcyx sparverioides</i>	2000-2500	3, 10, 11,14			H, T, Y	2,7	
INDIAN CUCKOO <i>Cuculus micropterus</i>	1900-2400	3,6,10,12	B, T, W			4,8	
EURASIAN CUCKOO <i>Cuculus canorus</i>	1800-2400	3,6,11,12	B, Br, T, W		H, I, T	7	
ORIENTAL CUCKOO <i>Cuculus saturatus</i>			B, T, W		H, T		
ASIAN KOEL <i>Eudynamys scolopacea</i>			Br, T				
GREATER COUCAL <i>Centropus sinensis</i>					I, S		
ALEXANDRINE PARAKEET <i>Psittacula eupatria</i>					K&S		
ROSE-RINGED PARAKEET <i>Psittacula krameri</i>	900			M		T	Baram
SLATY-HEADED PARAKEET <i>Psittacula himalayana</i>	1800-2400	3,14	G, R, T, W	13	Ah, Br, H, K&S, M, Sr, T	2-5,8	T, T&S
PLUM-HEADED PARAKEET <i>Psittacula cyanocephala</i>	1800-2200	3,10,14	T		I, K&S, S, T		T, T&S
RED-BREASTED PARAKEET <i>Psittacula alexandri</i>	2300			13	Br, K&S		
HIMALAYAN SWIFTLET <i>Collocalia brevirostris</i>							T&S
WHITE-THROATED NEEDLETAIL <i>Hirundapus caudacutus</i>	2000-2600	6,11,14			?Sr	4,5,9	
WHITE-RUMPED NEEDLETAIL <i>Zoonavena sylvatica</i>	1800-2400	3,11,15,19				8,7	
ASIAN PALM SWIFT <i>Cypsiurus balasiensis</i>	2000-2500	3,6				8,7	
ALPINE SWIFT <i>Tachymarptis melba</i>	1900-2600	3,6,11	R, T		H, K&S, Sr, T	5,8	Koe: Rathi
COMMON SWIFT <i>Apus apus</i>	1800-2400	3					
FORK-TAILED SWIFT <i>Apus pacificus</i>	1900	Salyani	?W				
HOUSE SWIFT <i>Apus affinis</i>				Br, R, T, W	Br, H, K&S, T		T&S
MOUNTAIN SCOPS OWL <i>Otus spilocephalus</i>				B, G, T	H, T		
COLLARED SCOPS OWL <i>Otus bakkamoena</i>	2000	Salyani					
SPOT-BELLIED EAGLE OWL <i>Bubo nipalensis</i>							T&S
TAWNY FISH OWL <i>Ketupa flavipes</i>							Br
BROWN WOOD OWL <i>Strix leptogrammica</i>	1800-2400	3	?W		H	2	
TAWNY OWL <i>Strix aluco</i>					H, T		
COLLARED OWLET <i>Glaucidium brodiei</i>	1800-2500	3	R, T	16	H, K&S, Si, T, Y	2,8,9	
ASIAN BARRED OWLET <i>Glaucidium cuculoides</i>	2000	Salyani	G		H, K&S, M, T		T&S
JUNGLE OWLET <i>Glaucidium radiatum</i>			?W		K&S		
SPOTTED OWLET <i>Athene brama</i>	900						Baram
BROWN HAWK OWL <i>Ninox scutulata</i>	2000	Salyani					
GREY NIGHTJAR <i>Caprimulgus indicus</i>	1600-2300	3,19		13		4-8,9	
LARGE-TAILED NIGHTJAR <i>Caprimulgus macrurus</i>	1700-2200	3			M		
ROCK PIGEON <i>Columba livia</i>	1200		Gh, W			Didihat	T, T&S
HILL PIGEON <i>Columba rupestris</i>	2400-2700	10,11,12					
SNOW PIGEON <i>Columba leuconota</i>	2000-2600	6				5,8	D, T&S
ORIENTAL TURTLE DOVE <i>Streptopelia orientalis</i>	1200-2500	3,6,10-12, 14,19	G, T, W	1,13,16-18	H, K&S, M, Si, T	2-8,9	Br, T&S

SPECIES	Altitudinal range (m)	Localities	Almora Other refs	Nainital Localities	Nainital Other refs	Pithoragarh Localities	Pithoragarh Other refs
LAUGHING DOVE <i>Streptopelia senegalensis</i>			Br, O, T		H, T		
SPOTTED DOVE <i>Streptopelia chinensis</i>	1800-2000	10	G, T, W		H, Sr, T	2	T, T&S
EURASIAN COLLARED DOVE <i>Streptopelia decaocto</i>	1800-2400	3,10,15	T, W	I		2	T, T&S
EMERALD DOVE <i>Chalcophaps indica</i>	900					Baram	
YELLOW-FOOTED GREEN PIGEON <i>Treron phoenicoptera</i>				H			
WEDGE-TAILED GREEN PIGEON <i>Treron sphenura</i>	1800-2400	3,10	Br, T, W		H, I, T	2,5,8	
WHITE-BREASTED WATERHEN <i>Amaurornis phoenicurus</i>					S		
RUDDY-BREASTED CRAKE <i>Porzana fusca</i>					Har		
COMMON MOORHEN <i>Gallinula chloropus</i>					M		
COMMON COOT <i>Fulica atra</i>				I			
EURASIAN WOODCOCK <i>Scolopax rusticola</i>					H, I, K&S, T		
COMMON SNipe <i>Gallinago gallinago</i>	1800	3					
COMMON REDSHANK <i>Tringa totanus</i>						T&S	
GREEN SANDPIPER <i>Tringa ochropus</i>					H, I, T		
GREAT THICK-KNEE <i>Esacus recurvirostris</i>					K&S		
IBISBILL <i>Ibidorhyncha stuthersii</i>					K&S		
LONG-BILLED PLOVER <i>Charadrius placidus</i>					K&S		
LITTLE RINGED PLOVER <i>Charadrius dubius</i>					H, T		
RED-WATTLED LAPWING <i>Vanellus indicus</i>	1200		R, T		M		T
SMALL PRATINCOLE <i>Glareola lactea</i>		Basarkhet			K&S		
WHISKERED TERN <i>Chlidonias hybridus</i>					H, I, T		Br
OSPREY <i>Pandion haliaetus</i>					I		
BLACK-SHOULDERED KITE <i>Elanus caeruleus</i>					S		
BLACK KITE <i>Milvus migrans</i>	1800	3	Br, G, O, T, W		Br, H, I, M, Sr, T		T, T&S
RED KITE <i>Milvus milvus</i>			N&D				
BRAHMINY KITE <i>Haliastur indus</i>					H, T		
LESSER FISH EAGLE <i>Ichthyophaga humilis</i>					H, T		T
LAMMERGEIER <i>Gypaetus barbatus</i>	1800-3000	3,6,11,12	Br, G, I, N, T, W	1,13,18	Br, H, I, K&S, M, Si, T	2-7	T, T&S
EGYPTIAN VULTURE <i>Neophron percnopterus</i>			Br, G, I, T		H, I, K&S, M, T		T&S
WHITE-RUMPED VULTURE <i>Gyps bengalensis</i>			G, O, T		H, K&S, Sr, T		
LONG-BILLED VULTURE <i>Gyps indicus</i>			O, T		K&S		T
HIMALAYAN GRIFFON <i>Gyps himalayensis</i>	1800-3000	3,6,11,12, 14,15,19	G, O, T	1,13,16,18	Ah, H, K&S, M, Sr, T	2-9	T, T&S
EURASIAN GRIFFON <i>Gyps fulvus</i>					K&S		T
RED-HEADED VULTURE <i>Sarcogyps calvus</i>	2000-2200	3	Br, G, O, T		Br, H, I, K&S, M, T	2,5,8	T
CINEROUS VULTURE <i>Aegypius monachus</i>					K&S		
CRESTED SERPENT EAGLE <i>Spilornis cheela</i>	1900-2500	3,6,11,12	T, W	1,13,18	K&S, T	2-7	T, T&S

SPECIES	Altitudinal range (m)	Locality	Almora Other refs	Nainital Localities	Other refs	Pithoragarh Localities	Other refs
PALLID HARRIER <i>Circus macrourus</i>							T&S
CRESTED GOSHAWK <i>Accipiter trivirgatus</i>					K&S		
SHIKRA <i>Accipiter badius</i>	2200	3	O, T				
?BESRA <i>Accipiter virgatus</i>			?W				
EURASIAN SPARROWHAWK <i>Accipiter nisus</i>	1600-2700	3,11,14				2-7	T&S
NORTHERN GOSHAWK <i>Accipiter gentilis</i>	1700-2400	3				8, 7	
WHITE-EYED BUZZARD <i>Buteastur teesa</i>			Br				
COMMON BUZZARD <i>Buteo buteo</i>					K&S		
LONG-LEGGED BUZZARD <i>Buteo rufinus</i>					H, K&S, T		
BLACK EAGLE <i>Ictinaetus malayensis</i>	1800-2500	3,10,14		1,13	H, I, K&S, M, T	2,5,8	
STEPPE EAGLE <i>Aquila nipalensis</i>			G		H, K&S, T		
IMPERIAL EAGLE <i>Aquila heliaca</i>					H, T		
GOLDEN EAGLE <i>Aquila chrysaetos</i>			R, T		K&S		
BONELLI'S EAGLE <i>Hieraetus fasciatus</i>	2000-2300	3	Br			8	
CHANGEABLE HAWK EAGLE <i>Spizaetus cirrhatus</i>	1700-1800	3	{ G		Br	5,8	
MOUNTAIN HAWK EAGLE <i>Spizaetus nipalensis</i>	2200-2400	3	{		K&S	2	
COLLARED FALCONET <i>Microhierax caerulescens</i>			R, T				Br
COMMON KESTREL <i>Falco tinnunculus</i>	1800-2400	3,11,12, 14,19	Br, G, O, T, W	1	H, T	2-7	T&S
EURASIAN HOBBY <i>Falco subbuteo</i>	1800	10	?W		K&S, Sr		
LAGGAR FALCON <i>Falco jugger</i>					H		
PEREGRINE FALCON <i>Falco peregrinus</i>					K&S		T
LITTLE GREBE <i>Tachybaptus ruficollis</i>					H, T		
?GREAT CRESTED GREBE <i>Podiceps cristatus</i>					?I		
HORNED GREBE <i>Podiceps auritus</i>					Dr		
INDIAN CORMORANT <i>Phalacrocorax fuscicollis</i>				M			
GREAT CORMORANT <i>Phalacrocorax carbo</i>					H, T		
CATTLE EGRET <i>Bubulcus ibis</i>					S		
INDIAN POND HERON <i>Ardeola grayii</i>					M, S		
BLACK STORK <i>Ciconia nigra</i>	1200	Basarkhet	G				
?ASIAN FAIRY BLUEBIRD <i>Irena puella</i>					M!		
GOLDEN-FRONTED LEAFBIRD <i>Chloropsis aurifrons</i>				K&S			
ORANGE-BELLIED LEAFBIRD <i>Chloropsis hardwickii</i>	2300		W		4		Whym
BAY-BACKED SHRIKE <i>Lanius vittatus</i>							Br
LONG-TAILED SHRIKE <i>Lanius schach</i>			Br, G, Gh		M		T, W
GREY-BACKED SHRIKE <i>Lanius tephronotus</i>	2100-2200	3,11,12			K&S	2,5,8	T&S
EURASIAN JAY <i>Garrulus glandarius</i>	1800-2500	3,6,10-12, 14,15,19	O, T, W	1,13,16-18	H, K&S, S, Sr, T	2-9	Br

SPECIES	Altitudinal range (m)	Almora		Nainital		Pithoragarh	
		Localities	Other refs	Localities	Other refs	Localities	Other refs
BLACK-HEADED JAY <i>Garrulus lanceolatus</i>	1800-2400	3,6,10-12, 14,15,19	G, T, W	1,13,16-18	H, I, K&S, Si, T	2-7	Br, T
YELLOW-BILLED BLUE MAGPIE <i>Urocissa flavirostris</i>	2100-2600	6,10-12,19	T, W		M	2-7	
RED-BILLED BLUE MAGPIE <i>Urocissa erythrorhyncha</i>	1800-2200	3,10,11, 14,19	G, T, W	16	Ah, H, I, K&S, M, Sr, T	2,5,8	T, T&S
COMMON GREEN MAGPIE <i>Cissa chinensis</i>							Whym
RUFous TREEPIE <i>Dendrocitta vagabunda</i>			G				
GREY TREEPIE <i>Dendrocitta formosae</i>	1800-2300	3,10,11,14, 15,19	W	18	K&S, M	2,5	T, T&S
SPOTTED NUTCRACKER <i>Nucifraga caryocatactes</i>					K&S		
RED-BILLED CHOUGH <i>Pyrrhocorax pyrrhocorax</i>							T&S
YELLOW-BILLED CHOUGH <i>Pyrrhocorax graculus</i>	2600	11					T&S
HOUSE CROW <i>Corvus splendens</i>	1700-2000	3,12,14,15,19	B, T, W	1,13,16-18	Si, T	2,4,7,9	Br, T
LARGE-BILLED CROW <i>Corvus macrorhynchos</i>	1800-2800	3,6,10-12, 14,15,19	G, T, W	1,13,16-18	H, I, K&S, M, Si, Sr, T, Y	2-9	Br, T, T&S
BLACK-NAPED ORIOLE <i>Oriolus chinensis</i>	2200	3					
EURASIAN GOLDEN ORIOLE <i>Oriolus oriolus</i>			Br, R, T, W				T&S
BLACK-HOODED ORIOLE <i>Oriolus xanthornus</i>				S			
MAROON ORIOLE <i>Oriolus traillii</i>	1800-2400	3,11,15			K&S	2-9	
BLACK-WINGED CUCKOO-SHRIKE <i>Coracina melaschistos</i>	2100-2400	3,6,11	W		H, T	2,5-9	
LONG-TAILED MINIVET <i>Pericrocotus ethologus</i>	1800-2300	3,6,10-12, 14,,19	G, W	1,13,17,18	H, K&S	2-7	Br, T
SHORT-BILLED MINIVET <i>Pericrocotus brevirostris</i>			T		Ro, T		
SCARLET MINIVET <i>Pericrocotus flammiceps</i>	1800-2100	3,6,10-12, 14,19			Si, Sr	2-8	
BAR-WINGED FLYCATCHER-SHRIKE <i>Hemipus picatus</i>	2100	3,10	R, T		K&S, M		
YELLOW-BELLIED FANTAIL <i>Rhipidura hypoxantha</i>	2100-2500	6,11,14, 15,19	G, W		H, K&S, T	2,5,8	
WHITE-THROATED FANTAIL <i>Rhipidura albicollis</i>	1800-2400	3,10		13,16	K&S, M, Si	4,8,7	T, T&S
WHITE-BROWED FANTAIL <i>Rhipidura aureola</i>						T	
BLACK DRONGO <i>Dicrurus macrocercus</i>			T		H, Si, Sr, T		T, T&S
ASHY DRONGO <i>Dicrurus leucophaeus</i>	1700-2600	3,6,10-12, 14,19	G, T, W	1	H, T	2,5,8	Br
WHITE-BELLIED DRONGO <i>Dicrurus caerulescens</i>					K&S		
BRONZED DRONGO <i>Dicrurus aeneus</i>	1700	3			K&S	2	
LESSER RACKET-TAILED DRONGO <i>Dicrurus remifer</i>	1800			17			T
SPANGLED DRONGO <i>Dicrurus hottentottus</i>	1800-2100	3,10,19			K&S	5,8	
ASIAN PARADISE-FLYCATCHER <i>Terpsiphone paradisi</i>			Br, W		I		T&S
BROWN DIPPER <i>Cinclus pallasii</i>	2100-2500	6,11	W		K&S	8	T
BLUE-CAPPED ROCK THRUSH <i>Monticola cinclorhynchus</i>	1800-2400	3,6	Br, T, W	1	Br, H, Sr, T	8	
CHESTNUT-BELLIED ROCK THRUSH <i>Monticola rufiventris</i>	2100-2500	3,11,12, 14,15	Br, W	13	Br, H, K&S, T	2,5-7	
BLUE ROCK THRUSH <i>Monticola solitarius</i>			R, T, W		H, K&S		
BLUE WHISTLING THRUSH <i>Myophonus caeruleus</i>	1800-2700	3,6,10-12, 14,15,19	G, T, W	13,16-18	Ah, H, I, K&S, M, Si, Sr, T	2,5-7	Br, T, T&S
?PIED THRUSH <i>Zoothera wardii</i>			?W				

SPECIES	Altitudinal range (m)	Almora		Nainital		Pithoragarh	
		Localities	Other refs	Localities	Other refs	Localities	Other refs
PLAIN-BACKED THRUSH <i>Zoothera mollissima</i>					K&S		
LONG-TAILED THRUSH <i>Zoothera dixoni</i>	2100-2300	3			K&S		
SCALY THRUSH <i>Zoothera dauma</i>	2100-2400	3,6,11	R, T		H, K&S, T	2-5,7	
LONG-BILLED THRUSH <i>Zoothera monticola</i>			?W		K&S		
TICKELL'S THRUSH <i>Turdus unicolor</i>	2200-2400	3,6,11, 14,19	?W	1,16	Br, S	5,8	
WHITE-COLLARED BLACKBIRD <i>Turdus albocinctus</i>	2300-2800	6,11		13	Ah, H, K&S, Sr, T	7	
GREY-WINGED BLACKBIRD <i>Turdus boulboul</i>	2100-2600	3,6,10,11, 14,19	Br, G, T, W	16-18	H, I, K&S, M, S, T	2,5-7	T
CHESTNUT THRUSH <i>Turdus rubrocanus</i>					H, K&S, S, T		
DARK-THROATED THRUSH <i>Turdus ruficollis</i>	1800-2200	3,10,11, 14,19	W	16,18	H, K&S, T	5,8,9	
MISTLE THRUSH <i>Turdus viscivorus</i>	1900-2400	3,6,10-12, 14,15	T	13,16,18	H, I, K&S, T	2,5-7	
DARK-SIDED FLYCATCHER <i>Muscicapa sibirica</i>	1800-2300	3,6,10-12,19			M	2,8,7	
ASIAN BROWN FLYCATCHER <i>Muscicapa dauurica</i>			O, T		H, T		
RUSTY-TAILED FLYCATCHER <i>Muscicapa ruficauda</i>	2500		Wacchum		K&S, Si		
SLATY-BACKED FLYCATCHER <i>Ficedula hodgsonii</i>	900						
RUFOUS-GORGETED FLYCATCHER <i>Ficedula strophiata</i>	1800-2100	3,6,10,11	G	18	K&S	2,8,7	
RED-THROATED FLYCATCHER <i>Ficedula parva</i>					K&S		
SNOWY-BROWED FLYCATCHER <i>Ficedula hyperythra</i>					K&S		Baram
LITTLE PIED FLYCATCHER <i>Ficedula westermanni</i>	1800-2000	3,10			K&S	2,5	
ULTRAMARINE FLYCATCHER <i>Ficedula superciliaris</i>	1800-2600	3,6,10-12, 14,19	Br, T, W		Br, H, K&S, Si, Sr, T	2,5-7	
SLATY-BLUE FLYCATCHER <i>Ficedula tricolor</i>			R, T		K&S		T
VERDITER FLYCATCHER <i>Eumyias thalassina</i>	1800-2500	3,6,10-12, 14,19	T, W	16-18	Ah, H, I, K&S, M, Si, Sr, T	2-8,9	Br, T
SMALL NILTAVA <i>Niltava macgrigoriae</i>	2100-2300	3		18	K&S	2	T
RUFOUS-BELLIED NILTAVA <i>Niltava sundara</i>	1800-2400	3,6,11,12,14, 15,19		13,18	H, K&S, Sr, T	2-9	T&S
GREY-HEADED CANARY FLYCATCHER <i>Culicicapa ceylonensis</i>	1700-2400	3,6,10-12,14, 15,19	Br, W	1,13,16-18	Br, H, K&S, Si, Sr, T	2-9	
SIBERIAN RUBYTHROAT <i>Luscinia calliope</i>					K&S		
WHITE-TAILED RUBYTHROAT <i>Luscinia pectoralis</i>					K&S		T
INDIAN BLUE ROBIN <i>Luscinia brunneaa</i>	2100-2300				Si	5,9	
ORANGE-FLANKED BUSH ROBIN <i>Tarsiger cyanurus</i>	2000-2400	3,6,10,12, 14,15	G	1,13,17,18	H, K&S, T	2,8	
GOLDEN BUSH ROBIN <i>Tarsiger chrysaeus</i>					K&S		
RUFOUS-BACKED REDSTART <i>Phoenicurus erythronota</i>	1800-2200	3,11				2,5-7	
BLACK REDSTART <i>Phoenicurus ochruros</i>			Gh				
BLUE-CAPPED REDSTART <i>Phoenicurus coeruleocephalus</i>	1800-2300	3,6			K&S	2-5	
BLUE-FRONTED REDSTART <i>Phoenicurus frontalis</i>	1800-2200	3,6,10,15,19		13,17	H, K&S, T	2,8	
WHITE-CAPPED WATER REDSTART <i>Chaimarrornis leucocephalus</i>	1800-2500	3,6,11,14	R, T		H, I, K&S, M, Si, T	2,5,8	T

SPECIES	Altitudinal range (m)	Locality	Almora Other refs	Nainital Locality	Other refs	Pithoragarh Locality	Other refs
PLUMBEOUS WATER REDSTART <i>Rhyacornis fuliginosus</i>	2100-2600	6,11	T, W		H, K&S, Si, T	8	T, T&S
LITTLE FORKTAIL <i>Enicurus scouleri</i>	2100-2600	6			K&S	8	T&S
SLATY-BACKED FORKTAIL <i>Enicurus schistaceus</i>					K&S		T&S, Whym
SPOTTED FORKTAIL <i>Enicurus maculatus</i>	1800-2300	3,10,11,19	Br, R, T, W	18	Br, H, I, K&S, T	2,5,8	T, T&S
PURPLE COCHOA <i>Cochoa purpurea</i>			Br		Br, M		Whym
COMMON STONECHAT <i>Saxicola torquata</i>	900	Bageshwar	T, W		H, M, T		
PIED BUSHCHAT <i>Saxicola caprata</i>	1800-2200	3,11	T, W		K&S, T	8	Br, T
GREY BUSHCHAT <i>Saxicola ferrea</i>	1800-2400	3,6,10-12, 14,19	G, R, T, W	16,18	H, K&S, Si, Sr, T	2,5-9	Br
DESERT WHEATEAR <i>Oenanthe deserti</i>	2100	3			M		
?SPOT-WINGED STARLING <i>Saroglossa spiloptera</i>			?W				
CHESTNUT-TAILED STARLING <i>Sturnus malabaricus</i>			Br, W				
BRAHMINY STARLING <i>Sturnus pagodarum</i>			Br		R		
COMMON MYNA <i>Acridotheres tristis</i>	1800-2200	3,6,10,11,19	Br, G, T, W	1,16,18	Br, H, Sr, T	2-5,8	T, T&S
BANK MYNA <i>Acridotheres ginginianus</i>					M		
JUNGLE MYNA <i>Acridotheres fuscus</i>	1800-2300	3	Br, R, T		Br, K&S	9	T
HILL MYNA <i>Gracula religiosa</i>					I		
CHESTNUT-BELLIED NUTHATCH <i>Sitta castanea</i>	1800-2000	3,10	G, K&W, W		K&S, M		
WHITE-TAILED NUTHATCH <i>Sitta himalayensis</i>	2100-2600	3,11,12, 14,15	Br, W	1,13,16-18	Br, H, K&S, Si, Sr, T	2-9	
VELVET-FRONTED NUTHATCH <i>Sitta frontalis</i>			B, T, W		M		
WALLCREEPER <i>Tichodroma muraria</i>	2600	19	G		K&S	8	T
EURASIAN TREECREEPER <i>Certhia familiaris</i>	1800-2400	3		13,16	Ah	2,8,7	
BAR-TAILED TREECREEPER <i>Certhia himalayana</i>	1800-2600	3,10,11,12, 14,15,19	Br, F, G, T, W	1,13,16-18	Br, H, I, K&S, R, Si, Sr, T	2-9	T
RUSTY-ELANDED TREECREEPER <i>Certhia nipalensis</i>						W	
WINTER WREN <i>Troglodytes troglodytes</i>	2100-2400	6,11	T	13	T	8	
FIRE-CAPPED TIT <i>Cephalopyrus flammiceps</i>	2100-2500	3,6				2	
RUEOUS-NAPED TIT <i>Parus rufonuchalis</i>	2200-2700	3,6			M	2,8	T
RUFOUS-VENTED TIT <i>Parus rubidiventris</i>	2100-2400	6,11			K&S	2,5,8	
SPOT-WINGED TIT <i>Parus melanoleucus</i>	2100-2700	3,6,10-12,14, 15,19	W	1,13,16,18	H, Si, Sr, T	2-7	Br, T
?COAL TIT <i>Parus ater</i>	2200-2600	11				2,8	
GREY-CRESTED TIT <i>Parus dichrous</i>	2200-2600	11			H	8,7	
GREAT TIT <i>Parus major</i>	1800-2000	3,10	Br, G, O, W		M, T	2,5,8	
GREEN-BACKED TIT <i>Parus monticolus</i>	1800-2500	3,6,10-12, 14,15,19	G, T, W	1,13,16-18	Ah, Br, H, K&S, M, Si, Sr, T	2-9	
BLACK-LORED TIT <i>Parus xanthogenys</i>	1800-2600	3,6,10,11, 15,19	G, O, T	1,13,16,17	Ah, Br, H, K&S, M, Si, Sr	2,4,8,9	T
YELLOW-BROWED TIT <i>Sylviparus modestus</i>			Br, G		Br, K&S		
BLACK-THROATED TIT <i>Aegithalos concinnus</i>	1800-2500	3,6,10-12, 14,15,19	G, T, W	1,13,16-18	H, K&S, M, Si, Sr, T	2-9	Br
WHITE-THROATED TIT <i>Aegithalos niveogularis</i>	2000-2600	3,14,15		1,16,18	H	2-8,9	

SPECIES	Altitudinal range (m)	Almora		Nainital		Pithoragarh	
		Localities	Other refs	Localities	Other refs	Localities	Other refs
PLAIN MARTIN <i>Riparia paludicola</i>					K&S		
EURASIAN CRAG MARTIN <i>Hirundo rupestris</i>					K&S		
BARN SWALLOW <i>Hirundo rustica</i>	1800-2400	3,6,11,15,19	Br	1,13,17,18		4,5	
WIRE-TAILED SWALLOW <i>Hirundo smithii</i>	1000		W			Br	Baram
RED-RUMPED SWALLOW <i>Hirundo daurica</i>				B, Br, G, W		Br	
NEPAL HOUSE MARTIN <i>Delichon nipalensis</i>	2100	3			K&S		
GOLDCREST <i>Regulus regulus</i>	2300			13	K&S		
BLACK-CRESTED BULBUL <i>Pycnonotus melanicterus</i>					K&S		
RED-WHISKERED BULBUL <i>Pycnonotus jocosus</i>					M, Whi		
HIMALAYAN BULBUL <i>Pycnonotus leucogenys</i>	1800-2600	3,6,10-12, 14,15,19	Br, G, T, W		H, K&S, M, Si, Sr, T	2-9	T, T&S
RED-VENTED BULBUL <i>Pycnonotus cafer</i>	1800-2000	3,11	Br, G, W		H, M, Si, T	2,8	T, T&S
ASHY BULBUL <i>Hemixos flavala</i>	2300	11			K&S		Whym
MOUNTAIN BULBUL <i>Hypsipetes mcclellandii</i>	2000				H, K&S, T		
BLACK BULBUL <i>Hypsipetes leucocephalus</i>	1800-2500	3,6,10-12, 14,15,19	G, T, W	1,13,16-18	Br, H, K&S, M, T	2-8,9	
BRIGHT-HEADED CISTICOLA <i>Cisticola exilis</i>			W		Sm		
STRIATED PRINIA <i>Prinia criniger</i>	1800-2100	3			H, K&S, T	7	?Br
GREY-BREASTED PRINIA <i>Prinia hodgsonii</i>					K&S		
JUNGLE PRINIA <i>Prinia sylvatica</i>					K&S		
ASHY PRINIA <i>Prinia socialis</i>	1000					And	
PLAIN PRINIA <i>Prinia inornata</i>					K&S	Baram	
ORIENTAL WHITE-EYE <i>Zosterops palpebrosus</i>	1800-2200	3,10,11,12, 14,19	Br, G, T, W	1,16-18	Br, H, K&S, M, Si, T	2,5,8	T
CHESTNUT-HEADED TESIA <i>Tesia castaneocoronata</i>	2300				K&S, T	8	Why
BROWNISH-FLANKED BUSH WARBLER <i>Cettia fortipes</i>					K&S		
CHESTNUT-CROWNED BUSH WARBLER <i>Cettia major</i>	2100-2300	3			K&S	8	
ABERRANT BUSH WARBLER <i>Cettia flavolivacea</i>	1800-2200	3,10			K&S	8	
GREY-SIDED BUSH WARBLER <i>Cettia brunnifrons</i>					K&S		
SPOTTED BUSH WARBLER <i>Bradypterus thoracicus</i>	2100-2300	3,11					
BLYTH'S REED WARBLER <i>Acrocephalus dumetorum</i>			Br				
COMMON CHIFFCHAFF <i>Phylloscopus collybita</i>				Br			
SMOKY WARBLER <i>Phylloscopus fuliginosus</i>					K&S		
TICKELL'S LEAF WARBLER <i>Phylloscopus affinis</i>	2100-2600	3,6,10,11,14			K&S, Si	2,8,7	
SULPHUR-BELLIED WARBLER <i>Phylloscopus griseolus</i>			Br				
BUFF-BARRED WARBLER <i>Phylloscopus pulcher</i>	2000-2200	3			K&S	2,8	
ASHY-THROATED WARBLER <i>Phylloscopus maculipennis</i>	1800-2200	3,10,11	?G	17	K&S	8,7	
LEMON-RUMPED WARBLER <i>Phylloscopus chloronotus</i>			G		K&S		
HUME'S WARBLER <i>Phylloscopus humei</i>	1800-2600	3,6,10-12, 14,15,19		1,13,16-18	Br, H, K&S, T	2,5-9	

SPECIES	Altitudinal range (m)	Almora		Nainital		Pithoragarh	
		Localities	Other refs	Localities	Other refs	Localities	Other refs
LARGE-BILLED LEAF WARBLER <i>Phylloscopus magnirostris</i>	2100-2400	3,12		13		2,8	
GREENISH WARBLER <i>Phylloscopus trochiloides</i>	2100-2300	3,14	?B, ?W		H, T	2,5-7	
WESTERN CROWNED WARBLER <i>Phylloscopus occipitalis</i>	2000-2600	3,6,10,19	?W	18	H, T	5-7	
BLYTH'S LEAF WARBLER <i>Phylloscopus reguloides</i>	1800-2400	3,11,12,14			M	2,5,8	
GOLDEN-SPECTACLED/WHISTLER'S WARBLER <i>Seicercus burkii/whistleri</i>	1900-2400	3,6,10-12			K&S	2,5,7	
GREY-HOODED WARBLER <i>Seicercus xanthoschistos</i>	1800-2600	3,6,10-12, 14,15,19	Br, G, T, W	1,13,16-18	H, K&S, T	2,8-9	T
BLACK-FACED WARBLER <i>Abroscopus schisticeps</i>	1900-2500	6,11				5,8	
WHITE-THROATED LAUGHINGTHRUSH <i>Garrulax albogularis</i>	1800-2600	3,6,10-12, 14,15,19	B, T, W	1,13,16-18	Ah, Br, H, I, K&S, T	2-7	T
STRIATED LAUGHINGTHRUSH <i>Garrulax striatus</i>	1800-2700	3,6,11,12, 14,19		16,18	H, K&S, Sr, T	2,5,8	
WHITE-CRESTED LAUGHINGTHRUSH <i>Garrulax leucolophus</i>	2000		W	Jilling	H, I, K&S, T, V		T, T&S
RUFOUS-CHINNED LAUGHINGTHRUSH <i>Garrulax rufogularis</i>					K&S		
STREAKED LAUGHINGTHRUSH <i>Garrulax lineatus</i>	1800-2500	3,6,10-12, 15,19	Br, G, T, W	13,16-18	Br, H, K&S, Si, Sr, T	2-9	T
VARIEGATED LAUGHINGTHRUSH <i>Garrulax variegatus</i>	2200-2700	3,11	?W	13		8,7	
CHESTNUT-CROWNED LAUGHINGTHRUSH <i>Garrulax erythrocephalus</i>	2300-2600	3,6,11,19	Br	16	Br, H, K&S, T	2,8	
RUSTY-CHEEKED SCIMITAR BABBLER <i>Pomatorhinus erythrogenys</i>	1800-2500	3,6,10,11	Br, G, O, T		H, K&S, T	2-5,9	
WHITE-BROWED SCIMITAR BABBLER <i>Pomatorhinus schisticeps</i>					Br		
STREAK-BREASTED SCIMITAR BABBLER <i>Pomatorhinus ruficollis</i>	1800-2400	3	?W			8,7	
SCALY-BREASTED WREN BABBLER <i>Pnoepyga albiventer</i>	1900-2400	3,6,11			K&S		
BLACK-CHINNED BABBLER <i>Stachyris pyrrhopsis</i>			?W		K&S		
JUNGLE BABBLER <i>Turdoides striatus</i>							T
SILVER-EARED MESIA <i>Leiothrix argentauris</i>	2200	3					
RED-BILLED LEIOTHRICE <i>Leiothrix lutea</i>					H, K&S, T		
CUTIA <i>Cutia nipalensis</i>	2100-2400	3				2,8	
WHITE-BROWED SHRIKE BABBLER <i>Pteruthius flaviscapis</i>	2000-2300	3,19		1,17	H, K&S, T	2-8	
GREEN SHRIKE BABBLER <i>Pteruthius xanthochlorus</i>					K&S		
BLUE-WINGED MINLA <i>Minla cyanouroptera</i>	2100-2300		W	16,18	H, K&S, T	9	
CHESTNUT-TAILED MINLA <i>Minla strigula</i>	2100-2500	3,6,11,12		1,18	T	2,5-7	
WHITE-BROWED FULVETTA <i>Alcippe vireopectus</i>	2000-2500	6,11				2,5,8	
RUFOUS SIBIA <i>Heterophasia capistrata</i>	1800-2600	3,6,10-12, 14,15,19	B, G, T, W	1,13,17,18	H, K&S, Si, Sr, T	2-9	T, T&S
WHISKERED YUHINA <i>Yuhina flavicollis</i>	1900-2700	3,6,11,14	?W	1,17,18	H, K&S	2-8	
STRIPE-THROATED YUHINA <i>Yuhina gularis</i>	2100-2600	6				2,7	
BLACK-CHINNED YUHINA <i>Yuhina nigrimenta</i>					K&S		Why, Whym
BLACK-THROATED PARROTBILL <i>Paradoxornis nipalensis</i>	2300					5,8	
LESSER WHITETHROAT <i>Sylvia curruca</i>	2100	3	Br				
ASHY-CROWNED SPARROW LARK <i>Eremopterix grisea</i>					K&S		
ORIENTAL SKYLARK <i>Alauda gulgula</i>			Br				T

SPECIES	Altitudinal range (m)	Locality	Almora Other refs	Nainital Localities	Other refs	Pithoragarh Localities	Other refs
THICK-BILLED FLOWERPECKER <i>Dicaeum agile</i>					K&S		
YELLOW-BELLIED FLOWERPECKER <i>Dicaeum melanoxanthum</i>	2200		P				
FIRE-BREASTED FLOWERPECKER <i>Dicaeum ignipectus</i>	2100-2500	3,11			K&S	4,5	
PURPLE SUNBIRD <i>Nectarinia asiatica</i>			Br, T		S, T		T&S
MRS GOULD'S SUNBIRD <i>Aethopyga gouldiae</i>	2100-2600	14	?W			5,8,9	
GREEN-TAILED SUNBIRD <i>Aethopyga nipalensis</i>	2000-2500	3,6,10-12, 14,15	G	1,16	H, K&S, T	2,5-7	
BLACK-THROATED SUNBIRD <i>Aethopyga saturata</i>	2100-2200	3,6,11,12, 15,19	?W	16,18	K&S	2,5-7	
CRIMSON SUNBIRD <i>Aethopyga siparaja</i>	900					Baram	
FIRE-TAILED SUNBIRD <i>Aethopyga ignicauda</i>	1800-2300	11,14					
HOUSE SPARROW <i>Passer domesticus</i>	1800-2000	3,14,19	Br, T, W		Br, H, M, Sr, T	2,8	T, T&S
RUSSET SPARROW <i>Passer rutilans</i>	2100	3	G, T, W		H, K&S, Sr, T		T&S
EURASIAN TREE SPARROW <i>Passer montanus</i>	1900-2200	3,10,11, 14,19		13		2-9	T
CHESTNUT-SHOULDERED PETRONIA <i>Petronia xanthocollis</i>			B, T				
WHITE WAGTAIL <i>Motacilla alba</i>	2300		Gh		H, M, Si, T		T&S
WHITE-BROWED WAGTAIL <i>Motacilla maderaspatensis</i>			Gh!, W		K&S		
YELLOW WAGTAIL <i>Motacilla flava</i>					M		T
GREY WAGTAIL <i>Motacilla cinerea</i>	1800-2200	3,10,11,12	W		H, K&S, M, Si, T	2,8,9	T, T&S
PADDYFIELD PIPIT <i>Anthus rufulus</i>			W		K&S		T
LONG-BILLED PIPIT <i>Anthus similis</i>			Br, Hu, W		H, T		
TREE PIPIT <i>Anthus trivialis</i>			?W			Br	
OLIVE-BACKED PIPIT <i>Anthus hodgsoni</i>	1800-2300	3,6,10, 11,14			H, K&S, T	5	
ROSY PIPIT <i>Anthus roseatus</i>					K&S		
UPLAND PIPIT <i>Anthus sylvanus</i>			W		K&S		Br, T&S
ALTAI ACCENTOR <i>Prunella himalayana</i>					H, K&S		
RUFous-BREasted ACCENTOR <i>Prunella rubeculoides</i>	1800-2400		G		K&S		
BLACK-THROATED ACCENTOR <i>Prunella atrogularis</i>					K&S		
BLACK-BREasted WEAVER <i>Ploceus benghalensis</i>					Am ³		
STREAKED WEAVER <i>Ploceus manyar</i>					Am ³		
BAYA WEAVER <i>Ploceus philippinus</i>					Am ²		
FINN'S WEAVER <i>Ploceus megarhynchus</i>					A, A&C, Al, Am ¹ , Fi, Hum		
RED AVADAVAT <i>Amandava amandava</i>							T&S
INDIAN SILVERBILL <i>Lonchura malabarica</i>					K&S		
WHITE-RUMPED MUNIA <i>Lonchura striata</i>			W				
SCALY-BREasted MUNIA <i>Lonchura punctulata</i>	2100	3	G, Gh, W		K&S, M		
FIRE-FRONTED SERIN <i>Serinus pusillus</i>	2500	6			K&S, Si		
YELLOW-BREasted GREENFINCH <i>Carduelis spinoides</i>	2100-2500	3,11,12,14, 15,19	Br, G, T, W	13	Br, H, K&S, Si, Sr, T	2,8	T, T&S

SPECIES	Altitudinal range (m)	Almora		Nainital		Pithoragarh	
		Localities	Other refs	Localities	Other refs	Localities	Other refs
EUROPEAN GOLDFINCH <i>Carduelis carduelis</i>	2500	6			H, K&S, T		
PLAIN MOUNTAIN FINCH <i>Leucosticte nemoricola</i>					K&S		
SPECTACLED FINCH <i>Callacanthis burtoni</i>	2500	6			H, K&S, T		
DARK-BREASTED ROSEFINCH <i>Carpodacus nipalensis</i>	2000-2500		N&L	17	K&S	2	
COMMON ROSEFINCH <i>Carpodacus erythrinus</i>	1800-2400	3,10,14, 15,19	Br, G, Gh, T, W		K&S, Si, T	2,8	T, T&S
PINK-BROWED ROSEFINCH <i>Carpodacus rodochrous</i>	2100-2400	3,14	G	17	H, K&S, T		
VINACEOUS ROSEFINCH <i>Carpodacus vinaceus</i>	2100-2300	3,6,11,14		1	J, K&S	8,7	
SPOT-WINGED ROSEFINCH <i>Carpodacus rodopeplus</i>	2300-2500	6,11					
SCARLET FINCH <i>Haematoospiza sipahi</i>					K&S, Rob		
BROWN BULLFINCH <i>Pyrrhula nipalensis</i>	2200-2500	6,11			K&S	8	
RED-HEADED BULLFINCH <i>Pyrrhula erythrocephala</i>			?W				
BLACK-AND-YELLOW GROSBEAK <i>Mycerobas icterioides</i>	2100-2700				H, K&S, T	2,7	
COLLARED GROSBEAK <i>Mycerobas affinis</i>	2500				H, K&S	7	
SPOT-WINGED GROSBEAK <i>Mycerobas melanozanthos</i>	2400	6			H, K&S, T		
CRESTED BUNTING <i>Melophus lathami</i>	1700-1900	3	W			5,8	Br
ROCK BUNTING <i>Emberiza cia</i>	1800-2300	3,11,12	G, W	13	H, K&S, Si, T	8	Mo, T&S
WHITE-CAPPED BUNTING <i>Emberiza stewarti</i>					K&S		
CHESTNUT-EARED BUNTING <i>Emberiza fucata</i>	2000-2400	3,6,11			K&S	2,5-7	

See Table 1 and Figure 1 for the names and locations of the localities

See the references for an explanation of the codes in the 'Other refs' column