

Santel Galliformes Survey: a possible extension of
Pipar Pheasant Reserve,
Annapurna Conservation Area, Central Nepal

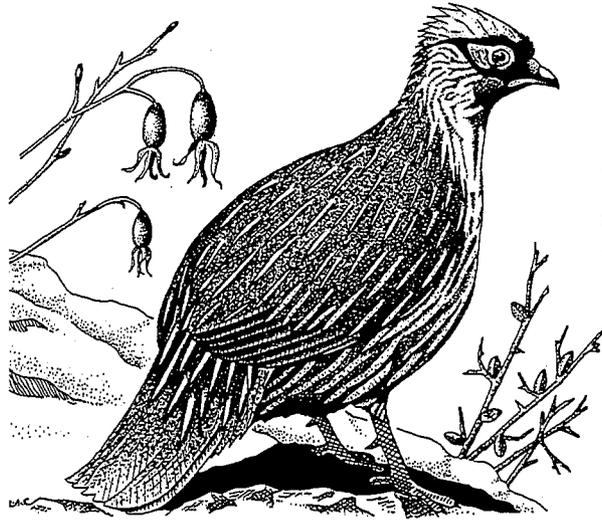


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Santel Galliformes Survey: a possible extension of Pipar Pheasant Reserve, Annapurna Conservation Area, Central Nepal



Blood pheasant by Dave A. Showler

A report to the World Pheasant Association and Annapurna Conservation Area Project

2001

By:

Hem Sagar Baral, Bird Conservation Nepal, P. O. Box 12465, Kathmandu, Nepal
Prem Chandra Gurung, Annapurna Conservation Area Project, P. O. Box 183, Pokhara, Nepal
Rahul Kaul and K. Ramesh, WPA-South Asia Field Office, New Delhi, India

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We would like to thank all the team members of this survey for their tireless efforts, great enthusiasm, humour and excellent teamwork.

In spite of bad weather during the survey, cook and porters did excellent job throughout the survey. Thanks to all the members. Om Bahadur Chhetri (ACAP-guard) and Tapta Bahadur Pun (WPA-guard) are specially thanked for their invaluable contribution towards this survey.

Participants' List:

Dr Ramesh Krishnamurti (Technical Adviser/WPA-SAFO)
Dr Hem Sagar Baral (Principal Investigator/BCN)
Mr Prem Chandra Gurung, BSc (ACAP- Officer for Lwang Sector)
Mr Haris Rai, MSc (Vice-President/BCN)
Mr Amrit Babu Karki, BSc (Communications and Information/BCN)
Mr Anil Shrestha, BSc (Instructor, Institute of Forestry, Hetauda)
Mr Nilesh Timilsina, MSc (BCN)
Mr Nabin Baral, MSc (ACAP- Officer for Ghandruk Sector)
Mr Poorneshwor Subedi, BSc (Institute of Forestry, Pokhara)
Mr Nabin Gyanwali, BSc (Institute of Forestry, Pokhara)

Also accompanying the team were:

Om Bahadur Chhetri (ACAP-guard)
Tapta Bahadur Pun (WPA-guard)

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Background

Nepal has traditionally given special emphasis to galliform conservation. To a Nepali, galliforms belong to the best known of the bird Orders. *Danphe* or the Himalayan monal *Lophophorus impejanus*, is the national bird of Nepal and is protected by law. Of the nine bird species that are protected by law, three are pheasants, the other two being cheer pheasant *Catreus wallichi* and satyr tragopan *Tragopan satyra*.

WPA began its work in Nepal in 1979 with a survey of the Pipar area for pheasants (Lelliot and Yonzon 1980). Pipar was found out to be exceptionally rich for the pheasant species. Since then, WPA has been monitoring the health of the Pipar forest and galliformes at regular intervals. So far nine surveys in the months of April and May (from 1979 to 1983 each year, 1985, 1987, 1991 and 1998) have been conducted at Pipar area and results suggest that the populations of galliforms at Pipar are relatively stable (Kaul and Shakya 2001). WPA has been involved in the monitoring galliformes population in Pipar now for over a decade. This is probably the longest running regular bird population monitoring scheme in Nepal.

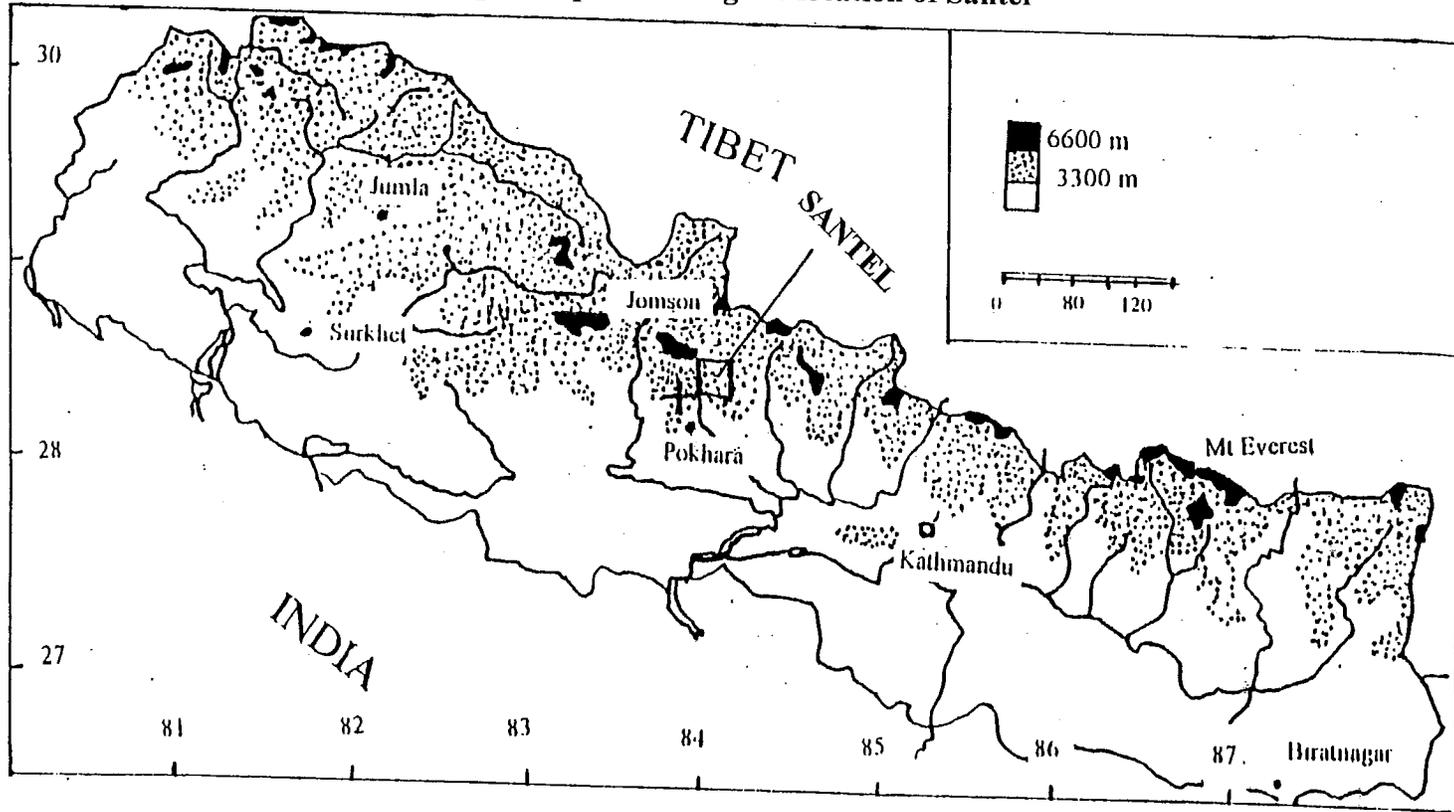
Kaul and Shakya (2001) recommended that an area adjoining Pipar, called Santel should be explored in the context of extending the reserve, and thereby reducing the potential impact of planned trekking tourism activity. During the International Galliformes Symposium (Nepal 2000), it was decided that habitats and pheasant populations in Pipar should be monitored on a regular basis and that new areas like Santel should be explored. As a result, this project was executed to document the avifauna of Santel with a focus on Galliformes species. Based on the past surveys, a conservation plan for Pipar is underway (WPA in prep.).

Study Area

The Santel area of forest (1500-4000m) is located in the cis-Himalyan region of the Annapurna Conservation Area Project (ACAP). It is in the upper Seti Valley lying on the east bank opposite of Pipar with eco-zones extending from subtropical to nival. Santel area lies under the two Village Development Committees (VDCs), Machhapuchhre and Sardi Khola. Tourism is not permitted to this area and it remains in a pristine condition.

A description of vegetation based on our survey is given in the results.

Map of Nepal Showing the location of Santel



Survey methods

The study area was visited between 29 April-10 May 2001 (Tables 1 & 2).

Table 1. Itinerary for the Santel Galliformes Survey, 29 April – 10 May 2001

28 April	Arrival of K. Ramesh from New Delhi. Permission to work and participants were finalized.
29 April	Survey team leaves with cook and porters from Kathmandu. Some joined at Milan Chowk. From Milan Chowk a short drive (1/2 hour) on a dirt/gravel road to Dhiprang.
30 April	A gentle walk to Santel along the bank of Seti Khola. On the way Ghatte Khola and Bhalaundi Khola, tributaries of Seti were crossed on wooden and concrete bridges. Visit to Howman School at Karuwa on the way. Briefing on progress by the school Headmaster. After taking <i>dal bhat</i> , a steep ascent to Dhije. Forests relatively untouched. Afternoon locating the vantage points for the following morning call counts.
1 May	First call count morning, 3 stations were covered at Dhije (See Table 2).
2-3 May	Rain hampers call count for two consecutive morning. When clear, birdwatching was done in the vicinity.
4 May	Five hours steep ascent to Khuine (See Table 2). Broadleaf trees <i>Quercus</i> spp., <i>Acer</i> spp., and <i>Rhododendron</i> spp. were the main tree species recorded in between. It was a pristine and moist forest with plenty of bamboo as undergrowth lacking any obvious trails. Afternoon locating the vantage points.
5-6 May	Call count at middle and higher elevations. Part of the survey team descends down for 3 nights camping to cover mid-altitudes. Rest at Khuine. Forests around Khuine (3000m), mainly <i>Rhododendron</i> spp. and <i>Betula</i> spp. Higher up towards Namsung (3100-3300m), forest was mainly dominated by <i>R. campanulatum</i> and <i>R. barbatum</i> .
7-8 May:	Trek to Namsung (3300m) for an hour. Camp.
9 May	Survey team returns from Namsung to Dhiprang. A steep descend where a large range of vegetation was encountered. The forests similar to the one on the northwestern side (Dhije to Namsung), however this side less moister but sunnier.
10 May	Dhiprang to Milanchowk. Group starts dispersing. Drive to Kathmandu.
11 May	Final discussion with K Ramesh in Kathmandu.
12 May	K. Ramesh leaves for Delhi.

K. Ramesh briefed about the methodology and some of his experience from his work in western Himalaya. Anil Shresha and Amrit Babu Karki, team members of the 1998 Pipar survey also gave significant inputs into the pre survey discussions.

Major tree and shrub types were identified for a general vegetation description of the area. Call counts were carried to produce abundance indices of galliformes. This method involved positioning observers at pre-determined points before dawn. These observers plotted the apparent position of all calling individuals by species on a data-recording sheet. This protocol has been used in the past Pipar survey (Kaul and Shakya 2001). We took care to eliminate any double counts between adjacent observation points by deleting the birds from the station placed comparatively distant.

10 calling stations were identified and trees were marked permanently for future use (Table 2). Every morning, all calling stations within a site were attended by at least one person with knowledge on the calls of the local galliforms. Counts were registered between 0430 to 0530 hrs. After the call counts, on the way to the camp, all birds and mammals seen or heard were also recorded.

Table 2. Location of camps and stations with their altitude

Camp	Place	Station	Altitude (in metres)
1	Dhije	1	2120
1	Dhije	2	2180
1	Dhije	3	2280
2	Dhije Khuine	4	2760
2	Dhije Khuine	5	2860
3	Khuine	6	2920
3	Khuine	7	3020
3	Khuine	8	3080
3	Khuine	9	3240
4	Namsung	10	3200

The total galliform number was calculated by adding all the numbers in a site in one session. A mean number was calculated from maximum and minimum total. This mean number was divided by the number of stations present in the particular site. The final number obtained thus was called mean per station. This was done to compare the species richness.

Qualitative assessment of threats posed to this area was carried out. Whatever evidence was seen in the forest or information was received from the locals on livestock grazing, fuel and fodder collection, hunting and associated disturbances such as fire were noted and interpreted.

Results

Vegetation description

Santel appeared to be similar to Pipar in terms of size and habitats. The lower part of Santel was covered with subtropical broadleaved forests where *Schima wallichii* and *Castanopsis indica* were the dominant trees. Above this, temperate broad-leaved forests dominated the vegetation. Oak *Quercus sps.*, *Rhododendron arboreum* and *Alnus nipalensis* were the main tree species in this belt. Between the subtropical and temperate belts following subdominant

trees were also noted, *Daphniphyllum himalyansis*, *Swertia angustifolia*, *Cotoneaster spp.*, *Garuga pinnata*, *Malus baccata*, *Pyrularia edulis*, *Neolisea umbrosa*. In shady and moist parts at higher elevations *R. barbatum* was frequently seen. Singles of *Ilex diperyna* and *Acer spp.* appeared above 2800m. *Betula utilis* was found scattered amongst the extensive forests of *Rhododendron campanulatum* at the highest elevation mainly above 3000m. On the top of the hills and where there had been signs of disturbances, mainly small patches of alpine grasslands were noted. *Arundinaria spp.*, *Viburnum erubescens* and *Berberis spp.* were the dominant shrub species found in Santel and the hills above it.

Bird species richness

A total of 191 bird species were recorded, representing 10 orders and 31 bird families (from Dhiprang to Dhiprang, between 1400 and 3300m, 4 species were recorded outside this belt) (Appendix 1).

The Passeriformes was the best represented Order (141 species) followed by Ciconiformes (17). Galliformes, Piciformes and Cuculiformes each were represented by 7 species (Figure 1). Sylviidae with 45 species was the best represented of the families (Figure 2). A total of 9 families were represented by a single species (Table 3)

Table 3. Bird families represented by a single species.

Upupidae
Dacelonidae
Caprimulgidae
Scolopacidae
Cinclidae
Sittidae
Certhiidae
Aegithalidae
Zosteropidae

Of the 191 species recorded, nearly 90% (169 species) were resident species. Of these 40% were breeding resident in Santel (Figure 3). Summer visitors comprised only 7% of the total bird fauna. As many as 11 species that visit Santel in summer are known to breed.

Kalij pheasant *Lophura leucomelana* was noted at Dhije, whilst blood pheasant *Ithaginis cruentus* and Himalayan monal *Lophophorus impejanus* were seen only at the highest elevations. Black francolin *Francolinus francolinus* was heard calling from sunny facing slopes at the lower elevations from a scrub like forest.

Call counts

A total of 10 calling stations were manned for 23 hours by deploying as many as 12 people simultaneously. All calling stations were visited three times except the three stations (1, 2, 3) at the lowest elevation and one (10) at higher elevations. The lowest 3 stations were visited only once because of bad weather and the station 10 was visited only two times. Only three species of galliforms were regularly heard calling from the calling stations.

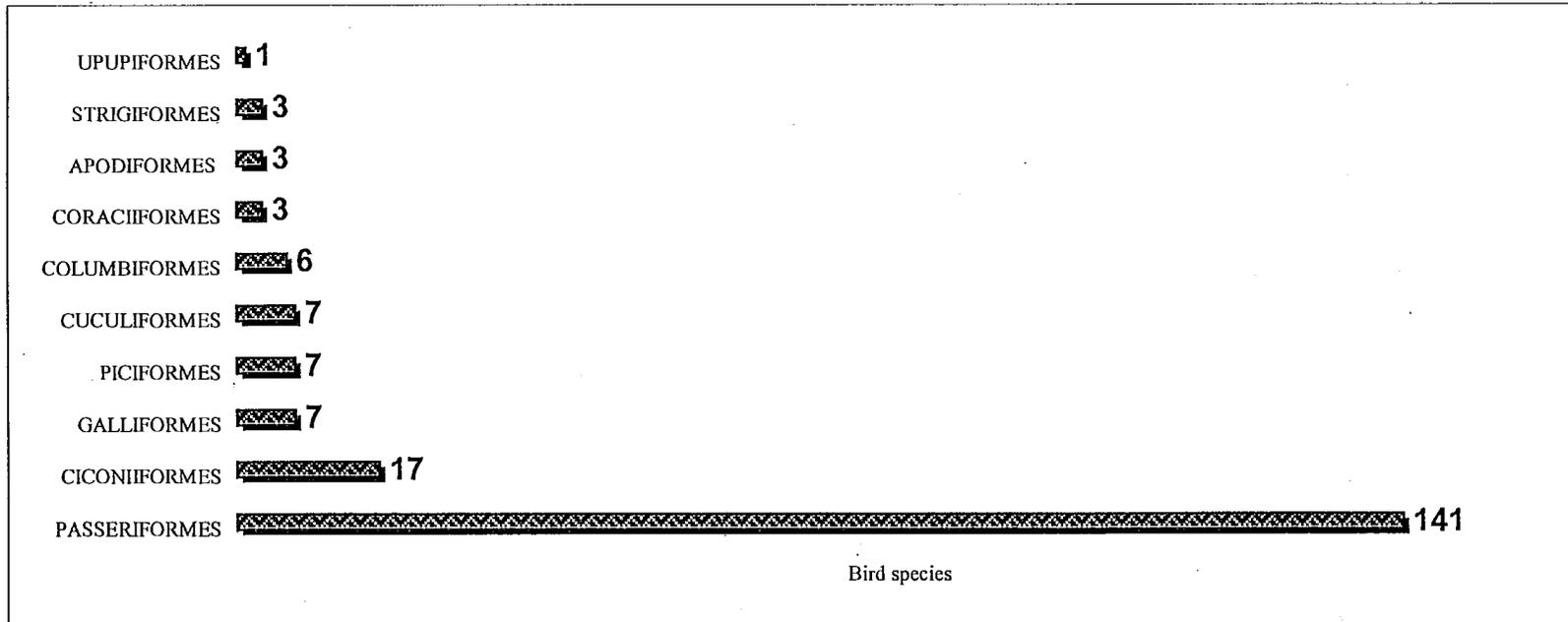


Figure 1. Bird Orders represented in Santel

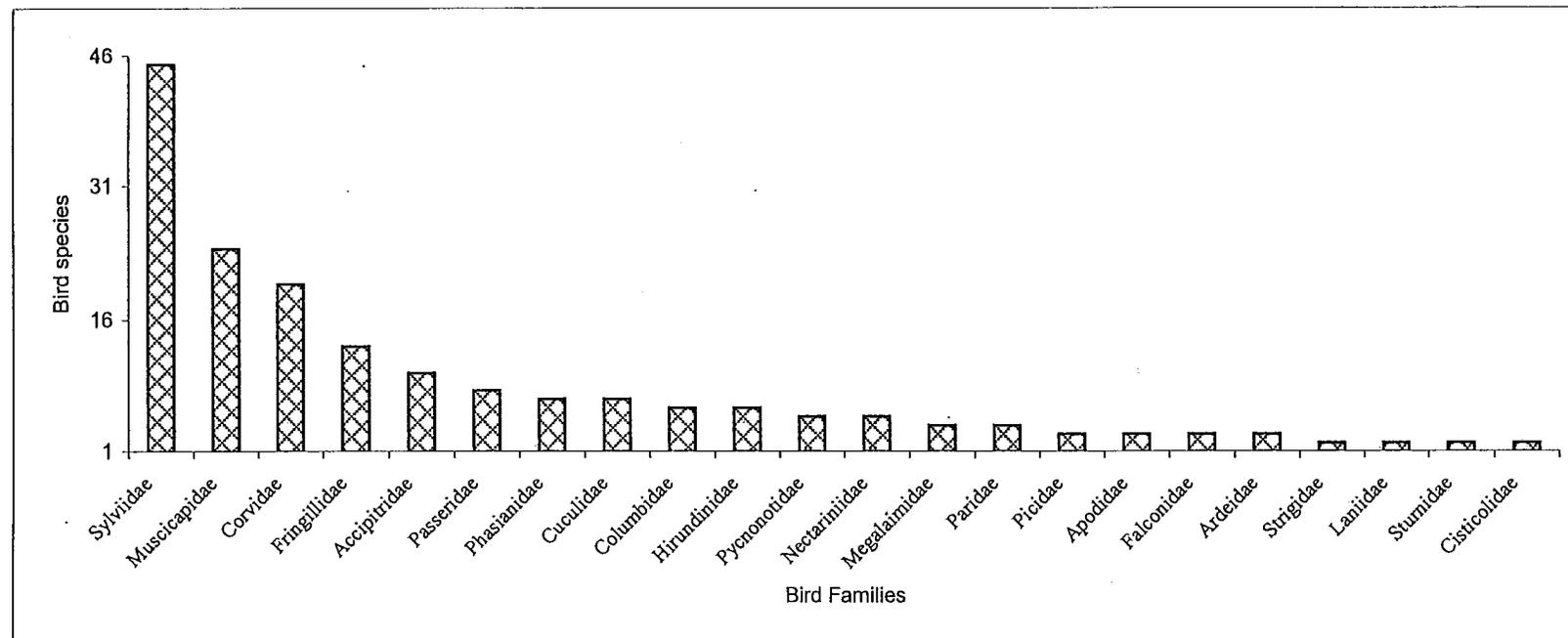


Figure 2. Bird Families represented in Santel

Satyr tragopan *Tragopan satyra*

A minimum total of 36 satyr tragopans *Tragopan satyra* were noted during the call counts. Tragopan was heard from all stations except the lowest two (Table 4). West facing moist and shady slopes near stations 7 and 8 had the highest number, with 10 and 8 satyrs counted respectively.

Table 4. Number of calling satyr tragopans at various stations with dates and altitude.

Site	Station No.	Altitude	1-May	5-May	6-May	7-May	8-May	9-May
1	1	2120	0					
1	2	2180	0					
1	3	2280	2					
2	4	2760			2	3	1	
2	5	2860			4	5	5	
3	6	2920		6	7	4		
3	7	3020		10	9	4		
3	8	3080		8	2	4		
3	9	3240		2	1	2		
4	10	3200					2	0

Koklass pheasant *Pucrasia macrolopha*

Only 9 koklass *Pucrasia macrolopha* males were heard during the call counts. Koklass was heard from 3 stations at the top and one station at the middle elevation. A minimum of 6 was heard from station 9, the highest placed station. It was absent from the lower and most of the middle elevations (Table 5).

Table 5. Number of calling koklass pheasant at various stations with dates and altitude.

Site	Station No.	Altitude	1-May	5-May	6-May	7-May	8-May	9-May
1	1	2120	0					
1	2	2180	0					
1	3	2280	0					
2	4	2760			0	0	0	
2	5	2860			0	1	0	
3	6	2920		0	0	0		
3	7	3020		0	0	0		
3	8	3080		1	4	2		
3	9	3240		6	2	2		
4	10	3200					2	2

Common hill partridge *Arborophila torqueola*

Of the galliformes recorded in Santel, common hill partridge *Arborophila torqueola* was heard from almost all stations (Table 6). A total of 29 were heard during the call counts of which 9 and 7 were around stations 8 and 7 respectively.

Table 6. Number of calling common hill partridge at various stations with dates and altitude.

Site	Station No.	Altitude	1-May	5-May	6-May	7-May	8-May	9-May
1	1	2120	1					
1	2	2180	3					
1	3	2280	0					
2	4	2760			3	3	1	
2	5	2860			1	1	1	
3	6	2920		0	7	2		
3	7	3020		7	4	2		
3	8	3080		9	2	2		
3	9	3240		4	3	4		
4	10	3200					1	0

Comparison of sites from call counts

Of the 4 sites in Santel (S1, S2, S3 and S4), site S3 was found to have higher number of calling males of satyr tragopan and common hill partridge (Figures 4 and 5). Contrary to this site S4 was found to be richer in the mean number of calling koklass males (Figure 6).

Galliform encounters

Because of difficult terrain for walking, adverse weather conditions and therefore decreased visibility the encounter rates were low. For example, only three satyr tragopans, five common hill partridges, six monals (probably the same 3 on the top), two blood pheasants and only one Kalij were actually seen on the entire trip.

Mammal species

Mammal species were recorded on the trails. Because of steep slopes and the noise generated by moving along the trails it was not possible to see mammals at close quarters. A total of 10 mammal species was seen (Table 7). Himalayan black bear *Ursos thibetanus* was heard and scats of common leopard *Panthera pardus* and Asiatic golden jackal were *Canis aureus* identified.

Table 7. Mammals recorded at Santel.

English name	Scientific name	Frequency	Heard	Droppings	Total
Himalayan Black Bear	<i>Ursos thibetanus</i>	1	1		1
Stone Marten	<i>Martes foina</i>		1		1
Orange-bellied Squirrel	<i>Dremomys lokriah</i>		2		2
Serow	<i>Capricornis sumatraensis</i>		2		3
Grey Ghoral	<i>Nemorhaedus goral</i>		1		1
Musk Deer	<i>Moschus chrysogaster</i>		1		2
Royle's Pika	<i>Ochotona roylei</i>		2		3
Barking Deer	<i>Muntiacus muntjak</i>		2		2
Rhesus Monkey	<i>Macaca mulatta</i>		1		10
Grey Langur	<i>Presbytis entellus</i>		1		7
Yellow-throated Marten	<i>Martes flavigula</i>		1		2
Common Leopard	<i>Panthera pardus</i>	1			1
Asiatic Golden Jackal	<i>Canis aureus</i>	2			12

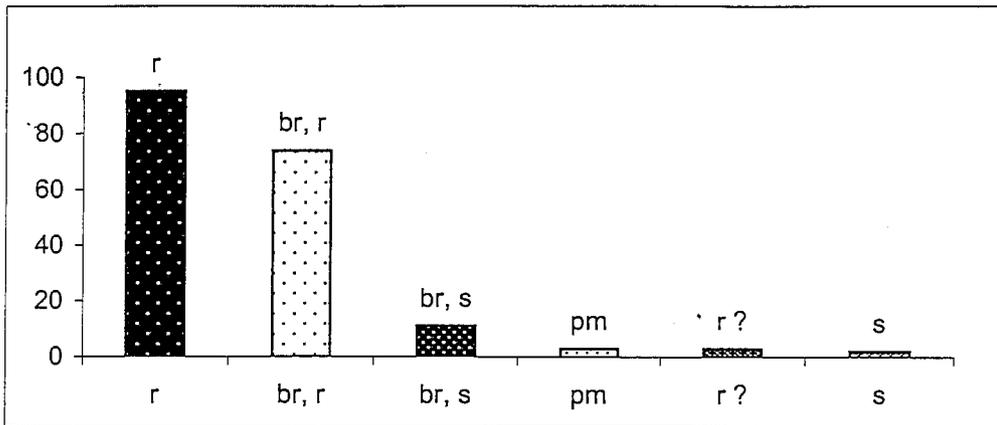


Figure 3. Status of birds recorded at Santel

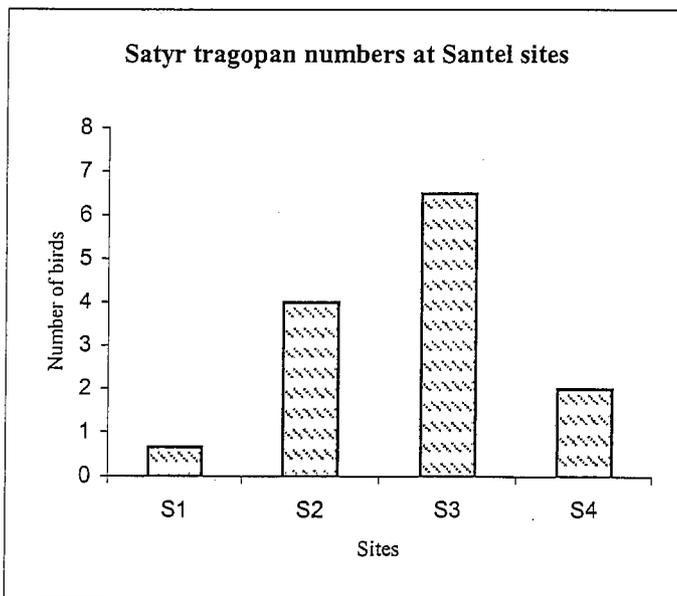


Figure 4. Mean number of calling satyr tragopan in Santel camp sites

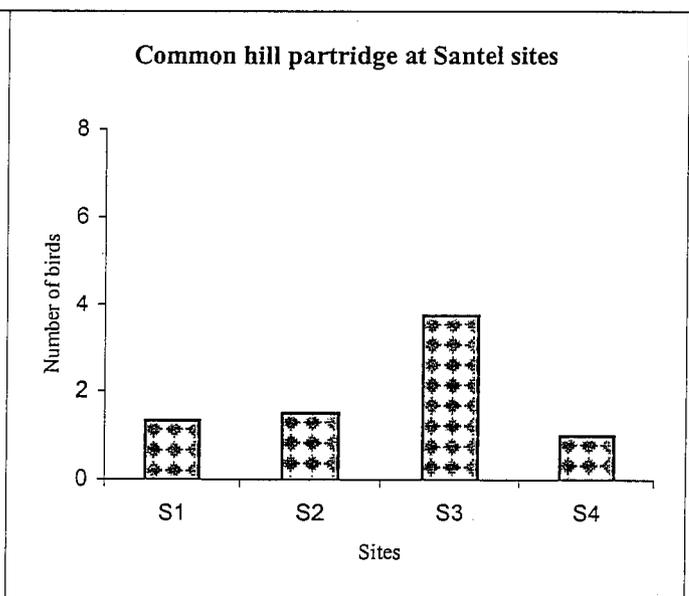


Figure 5. Mean number of calling common hill partridge in Santel camp sites

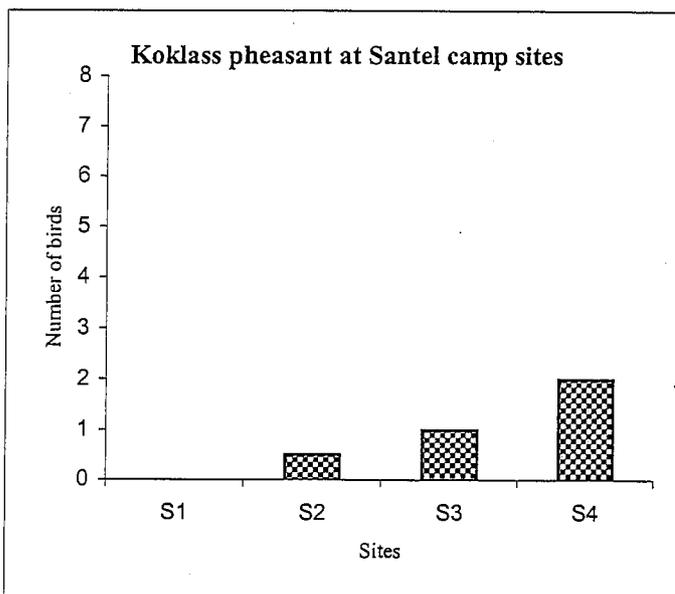


Figure 6. Mean number of calling koklass pheasant in Santel camp sites

Key to figures
r resident
br breeding confirmed
s summer visitor
pm passage migrant
 ? unconfirmed

S1 first camp at Santel
 S2 second camp at Santel
 S3 third camp at Santel
 S4 fourth camp at Santel

Serow *Capricornis sumatrensis* was sighted near Dhije (2100-2400m) at least two times, once in a pair. The forest type was temperate with thick layer of leaf litter on the ground. Himalayan black bear was heard near 3000m in the upper temperate forest. Musk deer were seen at Namsung at 3300m descending to a *Rhododendron campanulatum* forest. A grey ghoral *Nemorhaedus goral* was noted on grassy slope of Namsung 3200m. Barking deer *Muntiacus muntjak*, orange-bellied squirrel *Dremomys lokriah*, langur monkey *Presbytis entellus* and rhesus macaque *Macaca mulatta* were noted in temperate forests, the latter two in smaller troops of nearly 10 or above. Yellow-throated marten *Martes flavigula* was noted in lower temperate forest. Royle's pika *Ochotona roylei* and stone marten *Martes foina* were seen at Namsung camp site (3200m). Inspection of the scats of common leopard and Asiatic golden jackal were located on the trail between Namsung to Dhiprang on southwestern slopes.

Discussions

In spite of bad weather conditions, a total of 191 species were recorded in the survey area reflecting high avian species richness and relatively pristine forest condition. The high number of breeding and resident species make Santel very important and show its high conservation value. This is a high number compared to many other areas in Nepal (Inskipp 1989). It is likely that newer species will be added on in future surveys. Kaul and Shakya (1998) mention a total of 225 bird species recorded at Pipar during the past surveys. It is likely that future surveys in Santel will add more new species.

The maximum altitude surveyed during this survey was 3300 m and there was no trail giving easy access to higher altitudes than this. In the case of Pipar access trails were found even above this height and several high altitude bird species, for example Snow Partridge *Lerwa lerwa*, Tibetan Snowcock *Tetraogallus thibetanus* were recorded (Picozzi 1987, Kaul and Shakya 1998).

The temperate forests in Santel show least disturbance compared to several other areas within ACA and elsewhere in the protected areas of Nepal (Ref?). Blue-winged laughingthrush *Garrulax squamatus*, Asian emerald cuckoo *Chrysococcyx maculatus*, cutia *Cutia nipalensis* and hoary barwing *Actinodura nipalensis* are bird species that are found in relatively undisturbed temperate forests (Inskipp 1989). Several nationally threatened species were also noted, for example, golden-breasted fulvetta *Alcippe chrysotis*, great parrotbill *Conostoma emodium*, and black-throated parrotbill *Paradoxornis nipalensis*, all indicator species of good bamboo growth in the area (Inskipp 1989). The first two species are considered nationally threatened (Baral *et al.* 1996). These birds have declined elsewhere because of overexploitation of bamboo (Inskipp 1989).

Ground-nesting passerines are fairly common in Santel. These include, for example, chestnut-headed tesia *Tesia castaneacoronata*, scaly-breasted *Pnoepyga albiventer* and Nepal wren babblers *P. immaculata*. Galliformes share the same ground for nesting and therefore it can be said that they are comparatively safe in Santel. Increased livestock grazing activities are said to be detrimental for small passerine ground nesting birds (Bland and Nagendran 1993).

The nest of the golden-spectacled warbler's *Seicercus burkii* with young was located in a tree trunk at Dhije (2100m) and several singing Whistler's warblers *Seicercus whistleri* were noted above 2900m. These two species have been separated recently on the basis of their vocalizations and some morphological characters (Alström and Olsson 1999). Both species are fairly common at their respective altitudes at Santel.

We were informed that Cheer *Catreus wallichii* may occur during late summer months in Pipar area (ACAP guard Om Bahadur Chhetri *pers. comm*). One adult pheasant with long tail with two chicks was seen in July-August, 1999 and 2000. These pheasants were seen on the bare grassy slopes at Pipar. The ACAP and WPA guards will be going to Pipar this summer to check and inform Prem C Gurung or Poorneshwor Subedi about Cheer activities.

Satyr tragopan and common hill partridge are distributed from the lower elevations thinning out towards the high elevations. Their comparatively higher number in Santel S3 site indicates the optimum altitudinal range. Himalayan monal, koklass and blood pheasants are found at the higher elevations. For koklass, Santel's highest part is better habitat than the lower ones. Present call count data support the vertical distribution of these pheasants as outlined by previous studies in this area of Annapurna Conservation Area (Picozzi 1987, Inskipp and Inskipp 1991, Kaul and Shakya 1998).

Santel has particularly good populations of satyr tragopan and common hill partridge. The altitudinal range of Santel (1600-3300m) is the normal known range of these species. Few Himalayan monals were seen on the top of Santel as limited alpine scrubs, their summer habitat, was available for them. The koklass presence at Santel represents the easternmost place in its world distribution. There have been unconfirmed reports from above Sikles, a hill ridge slightly east of Santel. Inskipp and Inskipp (1991) state that its distributional range may go east as far as Marsyangdi between 20 to 30 kms from Santel but requires further confirmation.

Because Santel consists of large tract of undisturbed forest, several mammal species were recorded here. Among these, serow was particularly interesting. This animal has become rare or locally extinct from many other temperate forests of Nepal (Hari Sharan Nepali *verbally* 2001). Scats of common leopard and Asiatic golden jackal on the south facing slope indicate they fed opportunistically also on the domestic livestock.

Conservation problems

Grazing and associated disturbances

Seven *goths* (=graziers' shelters) were noted at different altitudes. On the north-western side (Santel to Namsung), Dhije (2100m) and Khuine (2860m) were the main *goths*. There was one comparatively larger *goth* at Namsung (3200m) which was probably the most regularly used *goth* in the entire area. Between Namsung to Dhiprang, descending from southwestern slopes, 4 additional *goths* were noted. They were at approximately 2500m, 2100m, 2000m and 1700m.

At Dhije, a total of 15 buffaloes and 5 cattle were noted. There were at least 4 people with two dogs in the area. Two *goths* were active with people. On the southwestern side, the *goth* at 2100m had 7 buffaloes whilst the rest of the *goths* were not yet used. Below 1800m on southwestern side, we found evidences of livestock grazing (including goats) and fodder collection. Nine villagers were met from Namsung down to 1800m. It is likely that the pressure to forests was higher here from the activities of nearby villages such as Kavre, Kharpani, Chipleti, Nayagaon and Chyaglung that lay just below than on the north facing slopes where we positioned the call counting points.

At Namsung, several rhododendron trees had been cut rampantly to clear a small flat area (300m²) in the middle of a forest. It is clear that the herders living in this area cut these trees every summer to rebuild the *goths* and for firewood. *Rumex nepalensis* and *Polygonum* sps. were found in the camp sites adjacent to all the *goths* indicating overgrazing by domestic livestock (K Ramesh pers. obs.).

Hunting and trapping

Hunting and trapping pressure were relatively low in the area compared to several other parts of ACA (Ref??). The evidence of these activities was verified by a 3-door live pheasant trap placed last year at Namsung (3300m) and gunshots heard in the area. Traps, such as these, are said to be least effective in catching large numbers of pheasants (K. Ramesh pers.obs.). On the 7 May, one gun-shot was heard around 0600hrs. On the following day, two shots (0530 and 0745 hrs) were heard from pheasant calling stations between Dhije and Khuine. The target animals for hunters is expected to be ungulates and galliforms.

Burning

Two near vertical slopes close to Namsung were burnt probably early 2001. Intentional fires are usually set by graziers to improve the growth of grasses. Some fires are natural such as the lightning. Fires can destroy forests and any species living in them. Fires are, generally limited in extent because many streams or rocky outcrops act as firebraker. Fires coinciding with the breeding time of birds can be very detrimental.

Recommendations

ACAP's approach of integrated conservation is a sound strategy for the conservation and development of the area (Gurung 2001). Poverty alleviation by the sustainable use of natural resources with emphasis on agro-forestry is one of the various activities undertaken by the ACAP (Gurung 2000). Similarly, ACAP has set guidelines on the collection of not timber forest product (NTFP) for its sustainable use (ACAP 2000) and is guided by a sound management plan (KMTNC 1997) which has incorporated recommendations from the plan for Pipar Pheasant Reserve proposed by Forster and Lelliot (1981). According to Prem Gurung (*pers. comm.*), there is tremendous pressure on ACAP from the villagers to open Pipar as a trekking route. Now ACAP is keen to open the Pipar area as a tourist destination with a careful management plan. It is likely that a trail to Pipar will be upgraded in 2001.

Pipar may be still the best place to see all of Nepal's five Himalayan pheasant species. Before opening up Pipar and Santel for tourists, a baseline study should be conducted from tourist point of view. Such surveys should consist a multi disciplinary team of botanists, ornithologists, sociologists, tourism expert etc. and take account of the following:

What are the reasons for opening up trail? It could be better scenery, pristine forests and wildlife, easy access to high peaks, economic benefit to locals etc.

How feasible the programme is in long term perspective? The chances are that the forests will be severely degraded at least along the trail side, higher fuelwood and fodder consumption as a result of local immigration to the area, sensitive wild animals will move away from the area, scale of hunting and disturbance will be increased.

How will we keep the impact level to a minimum? It is certainly a difficult task. Restriction in the number of tourists visiting the area, permission to environmentally sensitive and committed trekking agencies, by building community run lodges/restaurants in each village that are likely to be used by trekkers for eating and sleeping and restricting stay outside these areas are some of the measures.

What mechanism there is to monitor the impact of tourism on these sites? Pipar and Santel both have some data on the wildlife now, which can be regarded near pristine condition. These data will form a baseline to compare with the wildlife after the tourism is open to these areas. This should enable us to measure the impact in a quantitative way.

Surveys similar to that of Santel should be done in various watershed areas of ACA. These include, Mardi Khola, Sardi Khola, Modi Khola, forests north of Bhujung including Karpu and Telbrung Danda. These surveys will give further information on the habitat condition and wildlife of the whole area. Continuation of wildlife monitoring and vegetation survey programmes in Pipar and Santel are also necessary because of the imminence of trekking activity.

A vegetation survey is needed urgently in both Pipar and Santel. It is recommended that the data should be generated in a way that it can be compared to Picozzi (1984). If Santel is to be compared in relation to Pipar, same procedures have to be applied.

There is very little hunting and disturbance at present in Santel. However, monitoring of such factors even if they are in small scale is essential to relate with bird numbers in the future.

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Appendix 1. A checklist of the birds recorded during Santel Galliformes Survey 29 April-10 May 2001, Annapurna Conservation Area, Central Nepal

Systematic order of the checklist follows Inskipp *et al.* 1996. *An annotated checklist of the birds of the Oriental region*. Oriental Bird Club, UK.

Walk meaning bird recorded on the trail visited only once

Extensive meaning repeat visits to the areas

Walk	Walk	Extensive	Extensive	Walk
30-Apr-01	30-Apr-01	1-8 May-01	4-8 May-01	9-May-01
1300-1600m	1600-2100m	2100-3000m	3000-3300m	3300-1300m

GALLIFORMES	English Name	Dhiprang-Santel	Santel-Dhije	Dhije-Khuine	Khuine-Namsung	Namsung-Dhiprang	Status
Phasianidae							
<i>Francolinus francolinus</i>	Black Francolin					*	br, r
<i>Arborophila torqueola</i>	Hill Partridge	*	*	*	*	*	br, r
<i>Ithaginis cruentus</i>	Blood Pheasant				*		br, r
<i>Tragopan satyra</i>	Satyr Tragopan			*	*	*	br, r
<i>Pucrasia macrolopha</i>	Koklass Pheasant			*	*	*	br, r
<i>Lophophorus impejanus</i>	Himalayan Monal				*		br, r
<i>Lophura leucomelanos</i>	Kalij Pheasant			*			br, r
PICIFORMES							
Picidae							
<i>Dendrocopos cathpharius</i>	Crimson-breasted Woodpecker			*			br, r
<i>Picus chlorolophus</i>	Lesser Yellownape			*			br, r
<i>Picus canus</i>	Grey-headed Woodpecker		*	*		*	br, r
Megalaaimidae							
<i>Megalaima virens</i>	Great Barbet	*	*	*			br, r
<i>Megalaima franklinii</i>	Golden-throated Barbet	*	*	*			br, r
<i>Megalaima asiatica</i>	Blue-throated Barbet	*					br, r
<i>Megalaima haemacephala</i>	Coppersmith Barbet						br, r
UPUPIFORMES							
Upupidae							
<i>Upupa epops</i>	Common Hoopoe	*					pm
CORACIIFORMES							
Coraciidae							
<i>Coracias benghalensis</i>	Indian Roller						br, r
Dacelonidae							
<i>Halcyon smyrnensis</i>	White-throated Kingfisher	*					br, r
Cerylidae							
<i>Ceryle rudis</i>	Pied Kingfisher						br, r
CUCULIFORMES							
Cuculidae							
<i>Hierococcyx sparverioides</i>	Large Hawk Cuckoo		*	*			br, s
<i>Cuculus micropterus</i>	Indian Cuckoo	*					
<i>Cuculus canorus</i>	Eurasian Cuckoo				*		br, s

Falconidae							
Falco naumanni	Lesser Kestrel	*					pm
Falco tinnunculus	Common Kestrel	*					br, r
Falco peregrinus	Peregrine Falcon	*		*			r
Ardeidae							
Egretta garzetta	Little Egret	*					r
Bubulcus ibis	Cattle Egret	*					r
Ardeola grayii	Indian Pond Heron	*					r
PASSERIFORMES							
Laniidae							
Lanius schach	Long-tailed Shrike	*					br, r
Lanius tephronotus	Grey-backed Shrike	*					r ?
Corvidae							
Urocissa flavirostris	Yellow-billed Blue Magpie				*	*	r
Urocissa erythrorhyncha	Red-billed Blue Magpie					*	r
Cissa chinensis	Common Green Magpie	*					r
Dendrocitta vagabunda	Rufous Treepie	*					r
Dendrocitta formosae	Grey Treepie	*	*	*		*	r
Corvus splendens	House Crow	*				*	br, r
Corvus macrorhynchos	Large-billed Crow	*	*	*	*	*	br, r
Oriolus oriolus	Eurasian Golden Oriole	*					br, s
Oriolus traillii	Maroon Oriole		*	*			r
Coracina macei	Large Cuckooshrike	*					r
Coracina melaschistos	Black-winged Cuckooshrike	*					r
Pericrocotus ethologus	Long-tailed Minivet		*	*	*	*	br, r
Pericrocotus brevirostris	Short-billed Minivet		*	*			r
Pericrocotus flammeus	Scarlet Minivet	*	*	*			r
Rhipidura hypoxantha	Yellow-bellied Fantail			*	*	*	br, r
Rhipidura albicollis	White-throated Fantail	*	*	*			br, r
Dicrurus macrocercus	Black Drongo	*	*				r
Dicrurus leucophaeus	Ashy Drongo	*	*				r
Dicrurus aeneus	Bronzed Drongo	*	*				r
Dicrurus remifer	Lesser Racket-tailed Drongo		*	*			r
Cinclidae							
Cinclus pallasii	Brown Dipper	*					br, r
Muscicapidae							
Monticola rufiventris	Chestnut-bellied Rock Thrush			*			r
Myophonus caeruleus	Blue Whistling Thrush	*	*	*		*	br, r
Turdus albocinctus	White-collared Blackbird			*	*	*	br, r

Turdus boulboul	Grey-winged Blackbird		*	*			br, s
Muscicapa sibirica	Dark-sided Flycatcher		*				s
Ficedula strophciata	Rufous-gorgeted Flycatcher		*	*	*	*	br, r
Ficedula superciliaris	Ultramarine Flycatcher			*			s
Bumyias thalassina	Verditer Flycatcher			*			br, r
Niltava grandis	Large Niltava			*			r
Niltava macgrigoriae	Small Niltava	*	*				r
Niltava sundara	Rufous-bellied Niltava		*	*			r
Culicicapa ceylonensis	Grey-headed Canary Flycatcher	*	*	*			r
Luscinia brunnea	Indian Blue Robin		*	*			br, r
Tarsiger cyanurus	Orange-flanked Bush Robin			*			br, r
Tarsiger chrysaesus	Golden Bush Robin				*		br, r
Tarsiger indicus	White-browed Bush Robin			*			br, r
Copsychus saularis	Oriental Magpie Robin	*					br, r
Phoenicurus frontalis	Blue-fronted Redstart				*		br, r
Chaimarrornis leucocephalus	White-capped Water Redstart	*					r
Rhyacornis fuliginosus	Plumbeous Water Redstart	*					r
Enicurus maculatus	Spotted Forktail		*	*			r
Saxicola torquata	Common Stonechat	*					br, r
Saxicola caprata	Pied Bushchat	*					r
Saxicola ferrea	Grey Bushchat	*	*	*			br, r
Sturnidae							
Acridotheres tristis	Common Myna	*					br, r
Acridotheres fuscus	Jungle Myna	*					br, r
Sittidae							
Sitta himalayensis	White-tailed Nuthatch		*	*	*		br, r
Certhiidae							
Certhia nipalensis	Rusty-flanked Tree-creeper			*	*		br, r
Paridae							
Parus rubidiventris	Rufous-vented Tit			*	*	*	br, r
Parus dichrous	Grey-crested Tit			*	*	*	r
Parus monticolus	Green-backed Tit		*	*	*		br, r
Parus xanthogenys	Black-lored Tit	*	*	*			br, r
Aegithalidae							
Aegithalos concinnus	Black-throated Tit		*	*			r
Hirundinidae							
Riparia paludicola	Plain Martin	*					r
Hirundo rustica	Barn Swallow	*					r
Hirundo daurica	Red-rumped Swallow	*					r
Delichon urbica	Northern House Martin		*	*			

<i>Delichon dasypus</i>	Asian House Martin					*	r
<i>Delichon nipalensis</i>	Nepal House Martin	*	*				r
Pycnonotidae							
<i>Pycnonotus striatus</i>	Striated Bulbul			*			r
<i>Pycnonotus leucogenys</i>	Himalayan Bulbul	*	*	*			r
<i>Pycnonotus cafer</i>	Red-vented Bulbul	*					r
<i>Hypsipetes mclellandii</i>	Mountain Bulbul	*					r
<i>Hypsipetes leucocephalus</i>	Black Bulbul	*	*	*			r
Cisticolidae							
<i>Prinia criniger</i>	Striated Prinia	*	*				br, r
<i>Prinia hodgsonii</i>	Grey-breasted Prinia						r
Zosteropidae							
<i>Zosterops palpebrosus</i>	Oriental White-eye	*	*				r
Sylviidae							
<i>Tesia castaneocoronata</i>	Chestnut-headed Tesia			*			br, r
<i>Cettia major</i>	Chestnut-crowned Bush Warbler				*		br, r
<i>Cettia flavolivacea</i>	Aberrent Bush Warbler				*		br, r
<i>Cettia brunnifrons</i>	Grey-sided Bush Warbler				*		br, r
<i>Orthotomus sutorius</i>	Common Tailorbird	*					r
<i>Phylloscopus affinis</i>	Tickell's Leaf Warbler				*		br, r
<i>Phylloscopus pulcher</i>	Buff-barred Warbler		*	*			r
<i>Phylloscopus maculipennis</i>	Ashy-throated Warbler		*	*			r
<i>Phylloscopus chloronotus</i>	Lemon-rumped Warbler			*	*		r
<i>Phylloscopus humei</i>	Hume's Warbler	*		*			r
<i>Phylloscopus trochiloides</i>	Greenish Warbler	*		*	*		br, r
<i>Phylloscopus reguloides</i>	Blyth's Leaf Warbler		*	*	*		br, r
<i>Seicercus burkii</i>	Golden-spectacled Warbler		*	*			br, r
<i>Seicercus whistleri</i>	Whistler's Warbler			*	*		br, r
<i>Seicercus xanthoschistos</i>	Grey-hooded Warbler	*	*	*			br, r
<i>Seicercus castaniceps</i>	Chestnut-crowned Warbler			*			r
<i>Garrulax albogularis</i>	White-throated Laughingthrush		*	*			r
<i>Garrulax leucolophus</i>	White-crested Laughingthrush	*		*		*	r
<i>Garrulax striatus</i>	Striated Laughingthrush		*	*			r
<i>Garrulax ocellatus</i>	Spotted Laughingthrush				*		r
<i>Garrulax lineatus</i>	Streaked Laughingthrush			*			r
<i>Garrulax squamatus</i>	Blue-winged Laughingthrush			*			r
<i>Garrulax affinis</i>	Black-faced Laughingthrush				*		r
<i>Garrulax erythrocephalus</i>	Chestnut-crowned Laughingthrush	*	*	*			r
<i>Pomatorhinus erythrogenys</i>	Rusty-cheeked Scimitar Babbler	*					r
<i>Pnoepyga albiventer</i>	Scaly-breasted Wren Babbler			*			br, r
<i>Pnoepyga immaculata</i>	Nepal Wren Babbler	*					r
<i>Leiothrix lutea</i>	Red-billed Leiothrix			*			r

Cutia nipalensis	Cutia			*			r
Pteruthius flaviscapis	White-browed Shrike Babbler			*			r
Pteruthius xanthochlorus	Green Shrike Babbler			*			r
Pteruthius melanotis	Black-eared Shrike Babbler			*			r
Actinodura nipalensis	Hoary-throated Barwing		*	*			br, r
Minla cyanouroptera	Blue-winged Minla			*			r
Minla strigula	Chestnut-tailed Minla			*	*		br, r
Alcippe chrysotis	Golden-breasted Fulvetta			*			r
Alcippe castaneiceps	Rufous-winged Fulvetta			*			r
Alcippe vinipectus	White-browed Fulvetta			*	*		r
Alcippe nipalensis	Nepal Fulvetta		*	*			r
Heterophasia capistrata	Rufous Sibia	*	*	*	*	*	br, r
Yuhina flavicollis	Whiskered Yuhina	*	*	*			r
Yuhina gularis	Stripe-throated Yuhina			*	*		r
Yuhina occipitalis	Rufous-vented Yuhina			*	*		r
Conostoma oemodium	Great Parrotbill			*			r
Paradoxornis nipalensis	Black-throated Parrotbill			*			r
Nectariniidae							
Dicaeum ignipectus	Fire-breasted Flowerpecker		*	*			r
Aethopyga nipalensis	Green-tailed Sunbird		*	*			r
Aethopyga saturata	Black-throated Sunbird					*	r
Aethopyga siparaja	Crimson Sunbird	*					r
Aethopyga ignicauda	Fire-tailed Sunbird				*	*	r
Passeridae							
Passer domesticus	House Sparrow	*					br, r
Passer montanus	Eurasian Tree Sparrow	*				*	br, r
Motacilla cinerea	Grey Wagtail	*					r
Anthus rufulus	Paddyfield Pipit	*					br, r
Anthus hodgsoni	Olive-backed Pipit						br, s
Anthus roseatus	Rosy Pipit			*	*		br, s
Prunella strophiatea	Rufous-breasted Accentor				*		r
Lonchura striata	White-rumped Munia	*					r
Fringillidae							
Carduelis spinoides	Yellow-breasted Greenfinch			*	*		r
Carpodacus nipalensis	Dark-breasted Rosefinch				*		r
Carpodacus erythrurus	Common Rosefinch	*					r
Carpodacus rodochrous	Pink-browed Rosefinch		*	*			r
Carpodacus rodopeplus	Spot-winged Rosefinch			*			r
Carpodacus thura	White-browed Rosefinch		*	*			r
Haematospiza sipahi	Scarlet Finch			*			r
Pyrhula erythrocephala	Red-headed Bullfinch			*	*		r
Mycerobas affinis	Collared Grosbeak			*			r
Mycerobas melanozanthos	Spot-winged Grosbeak		*	*			r

Mycerobas carnipes	White-winged Grosbeak				*		
Pyrrhoptectes epauletta	Gold-naped Finch						r
Melophus lathamii	Crested Bunting	*			*		r
							br, r
Total		82	58	107	46	22	

* present

br breeding

r resident

s summer visitor

w winter visitor

pm passage migrant

Highlighted 4 species recorded outside the study area, Indian Roller, Coppersmith Barbet, Pied Kingfisher and Grey-breasted Prinia



Machhapuchhre (Fish Tail, 6093m) peak as seen from the first camp at 2100m, Santel. Photo: HS Baral



Machhapuchhre (Fish Tail, 6093m) peak as seen 3200m, Santel. Photo: HS Baral



Machhapuchhre (Fish Tail, 6093m) peak on a moon-lit night, Santel. Photo: HS Baral



The team (starting from left): HS Baral, OB Chhetri, TB Pun, H Rai, K Ramesh, PC Gurung, N Timilsina, P Subedi, A Shrestha, N Baral, N Gyanwali and AB Karki. Photo: HS Baral



The team members survey measuring vegetation characteristics in a *Rhododendron campanulatum* forest. Photo: HS Baral



Gold napped Finch recorded near the first camp, 2100m. Photo courtesy: Tim Inskipp



White-winged Grosbeak was noted above 3000m. Photo courtesy: Tim Inskipp



Blue-fronted Redstart (picture of a male) was found above 3000m close to *goth* area. Photo courtesy: Tim Inskipp