
The Avifauna and Conservation Value of Shey-Phoksundo National Park, Nepal

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Shey-Phoksundo National Park is the only protected area in the trans-Himalayan region of Nepal and, covering 3,555 km², it is the country's largest national park. The 38 species recorded within the national park for which Nepal may hold significant world populations are listed, together with a complete list of the 178 species recorded within the park to date. A summary of the main vegetation types within the park is provided, as well as an account of the conservation value and ornithological importance of each vegetation type. An account of the use of the park by people is given, and management problems in the park are described.

Shey-Phoksundo National Park (S.P.N.P.) is located in the Dolpa and Mugu districts of western Nepal, between 28°58'-29°56'N and 82°35'-83°14'E. Covering 3,555 km², S.P.N.P. is the largest national park in Nepal. It was gazetted in 1984 to preserve a variety of unspoilt trans-Himalayan as well as Himalayan habitats, along with the protection of a number of endangered mammal species such as the Snow Leopard *Panthera uncia*, Grey Wolf *Canis lupus*, and Himalayan Musk Deer *Moschus chrysogaster*.

The national park is divided in two by the Kanjiroba Himal which reaches its highest point at the 6,883 m Kanjiroba South Peak. About one-third of the park is situated south of Kanjiroba Himal and encompasses habitats typical of the Himalaya with extensive high-altitude grasslands interspersed with forests and scrubberies below 4,000 m. The habitats include forests of oak and conifers, mixed deciduous forests, and shrubberies of rhododendron and *Cotoneaster*. Here, the landscape is often extremely rugged even by Nepalese standards making survey work everything from breathless to dangerous.

North of Kanjiroba Himal the landscape changes dramatically. The steep hillsides of the true Himalaya are replaced by the gentle undulating hills of the Tibetan plateau. Because the Kanjiroba Himal acts as a rain barrier, the northern part of the national park only receives sparse rainfall. This is reflected in the vegetation, which is typical for a trans-Himalayan or Tibetan steppe and near desert vegetation, dominated by *Caragana* and dwarf junipers *Juniperus*.

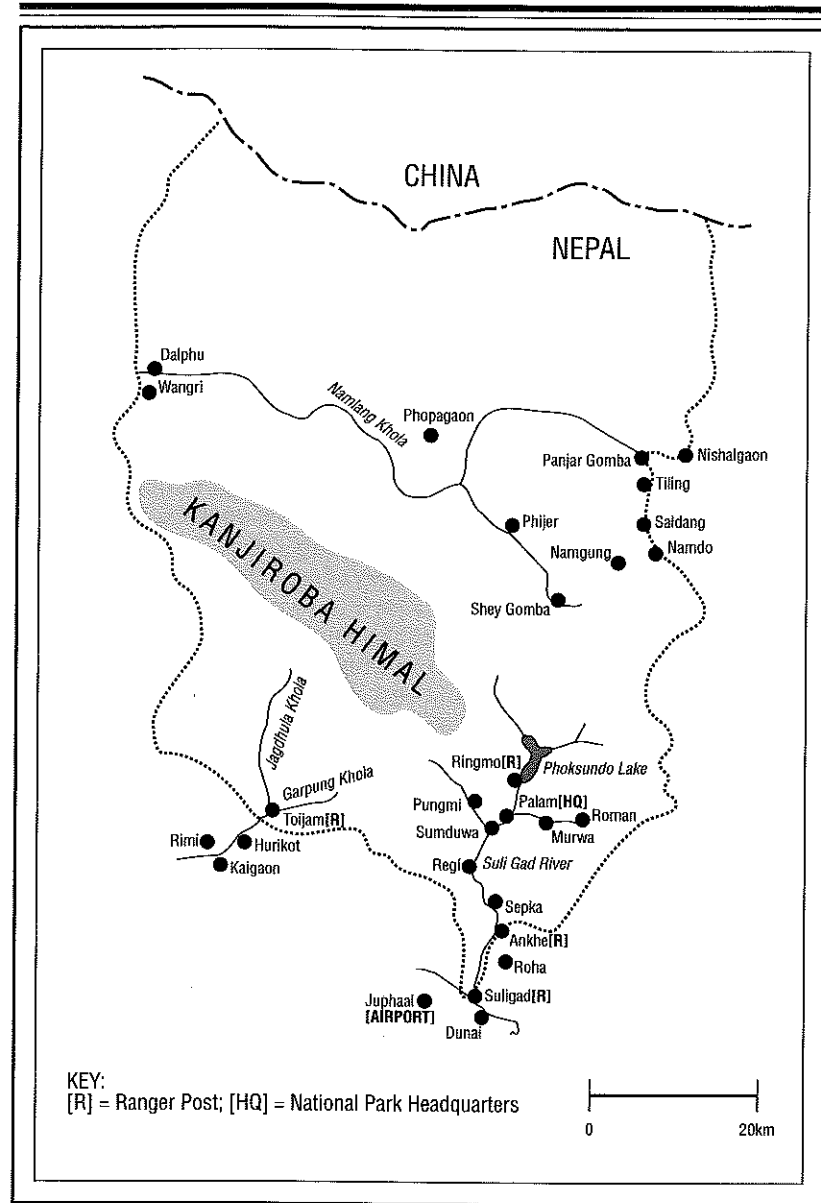


Figure 1. Shey-Phoksundo National Park, Nepal

PREVIOUS ORNITHOLOGICAL WORK IN SHEY-PHOKSUNDO NATIONAL PARK

Parallel to his botanical achievements Oleg Polunin was the first to make ornithological records in what is now Shey-Phoksundo N.P. (Polunin 1952). From his descriptions of birds seen during his 1952 expedition to Dolpo it is evident that he saw at least 42 species in the area covered by the park, including several bird species new to Nepal, three of which are of Tibetan affinity: Tibetan Partridge *Perdix hodgsoniae*, Little Owl *Athene noctua*, and Tibetan Ground-Jay *Pseudopodoces humilis* (Inskipp and Inskipp 1991). Robert L. Fleming, Jr. was the next to contribute to the ornithological knowledge of Dolpo during his visit to this remote region in June 1971 (Fleming 1975, 1982). He noted 100 species in the area of the park, including 73 not recorded by Polunin. Dr George B. Schaller and Peter Matthiessen visited the area in October-December 1973 mainly to study Bharal *Pseudois nayaur*; the former mentioned six species of birds in his book *Stones of silence* (Schaller 1980) and the latter mentioned 16 species in his book *The Snow Leopard* (Matthiessen 1978). Rodney M. Jackson worked in the Namlang valley between December 1976 and February 1977 and recorded 55 species of birds, including 15 new for the park area (Jackson 1978). He returned there several times from 1981 to 1985 with Darla Hillard, and they added three new species to the list (Hillard 1989). Dr Pralad Yonzon surveyed the western part of the national park in 1991 and his list (Yonzon 1991), which raised the park list by 15 species to a total of 152, indicated that additional ornithological work was needed in the park.

Between 27 March and 17 May 1992 we made a survey of the southern part of the national park (Priemé and Øksnebjerg 1992). The area surveyed included Jagdula Khola, Garpung Khola, along Suli Gad River and areas near Shey Gomba (Fig. 1). Besides work on the distribution of Snow Leopard and Bharal, botanical inventories, and human activity in the park, we investigated the bird species in all areas visited. A total of 125 bird species was found including 26 species new to the park, bringing the total recorded there to 178.

CONSERVATION VALUE

Shey-Phoksundo National Park is the only protected area in Nepal representative of the trans-Himalayan region. The park is of great importance for nature conservation not only in Nepal, but also in the Indian subcontinent, mainly because of its large size and low level of human disturbances. The extensive high-altitude grasslands within the park are the home of a sizeable and viable population of Snow Leopard together with good numbers of major herbivores, of which the Bharal is the most common.

Table 1. Bird species recorded within Shey-Phoksundo National Park for which Nepal may have significant world populations according to Inskipp and Inskipp (1986) and Inskipp (1989).

	1	2	3	4	5
SNOW PARTRIDGE <i>Lerwa lerwa</i>				?	
HIMALAYAN MONAL <i>Lophophorus impejanus</i>			+	+	+
WOOD SNIPE <i>Gallinago nemoricola</i>			(+)		
SPECKLED WOOD-PIGEON <i>Columba hodgsonii</i>		+			
HIMALAYAN WOODPECKER <i>Dendrocopos himalayensis</i>		+			
RUFOUS-BREASTED ACCENTOR <i>Prunella strophiate</i>			+	+	+
ROBIN ACCENTOR <i>Prunella rubeculoides</i>					+
INDIAN BLUE ROBIN <i>Luscinia brunnea</i>	+				
GOLDEN BUSH-ROBIN <i>Tarsiger chrysaeus</i>			?		
WHITE-BROWED BUSH-ROBIN <i>Tarsiger indicus</i>	+				
BLUE-FRONTED REDSTART <i>Phoenicurus frontalis</i>			+		+
WHITE-THROATED REDSTART <i>Phoenicurus schisticeps</i>				+	
WHITE-BELLIED REDSTART <i>Hodgsonius phoenicurooides</i>					+
PLAIN-BACKED THRUSH <i>Zosterornis mollissima</i>	+		+		
TICKELL'S THRUSH <i>Turdus unicolor</i>			(+)		
WHITE-COLLARED BLACKBIRD <i>Turdus albocinctus</i>	?	?			
GREY-SIDED BUSH-WARBLER <i>Cettia brunnifrons</i>			?		
GREY-HOODED WARBLER <i>Seicercus xanthoschistos</i>	+				
LARGE-BILLED LEAF-WARBLER <i>Phylloscopus magnirostris</i>	+				
BUFF-BARRED WARBLER <i>Phylloscopus pulcher</i>	+				
RUSTY-TAILED FLYCATCHER <i>Muscicapa ruficauda</i>	(+)				
ULTRAMARINE FLYCATCHER <i>Ficedula superciliiaris</i>	+				
YELLOW-BELLIED FANTAIL <i>Rhipidura hypoxantha</i>	+	+			
VARIEGATED LAUGHINGTHRUSH <i>Garrulax variegatus</i>			+	+	
GREEN SHRIKE-BABBLER <i>Pteruthius xanthochloris</i>		+			
WHITE-BROWED FULVETTA <i>Alcippe vinipectus</i>		+	+		
WHITE-THROATED TIT <i>Aegithalos niveogularis</i>		+	+		
GREY-CRESTED TIT <i>Parus dichrous</i>			+		
RUFOUS-VENTED TIT <i>Parus rubidiventris</i>	+				
BLACK-CRESTED TIT <i>Parus melanolophus</i>	+				
WHITE-CHEEKED NUTHATCH <i>Sitta leucopsis</i>			+		
KASHMIR NUTHATCH <i>Sitta cashmirensis</i>		+			
GREY-BACKED SHRIKE <i>Lanius tephronotus</i>			+		
PINK-BROWED ROSEFINCH <i>Carpodacus rodochrous</i>		+	+		
WHITE-BROWED ROSEFINCH <i>Carpodacus thura</i>			+		
STREAKED ROSEFINCH <i>Carpodacus rubicilloides</i>				+	
RED-HEADED BULLFINCH <i>Pyrrhula erythrocephala</i>	+	+			
COLLARED GROSBEAK <i>Mycerobas affinis</i>	?				

Key Vegetation type:
 1 = Mixed deciduous forest
 2 = Oak/conifer forest
 3 = Himalayan scrub
 4 = Himalayan alpine meadows
 5 = Trans-Himalayan habitats

+ = Recorded in the vegetation type and probably breeds there
 (+) = Recorded in the vegetation type but not known to breed there
 ? = Recorded within N.P. most likely in the indicated vegetation type

The park has a good variety of forests, many of which are of high quality. Even though these forests only comprise a minor fraction of the total area covered by the national park, about 59% of the bird species recorded, and 65% of breeding or probably breeding species depend on forests or scrub (throughout the rest of this paper the term 'breeding species' includes those known to breed as well as those assumed to breed).

Breeding bird species currently recorded from Shey-Phoksundo National Park number 137 and more are likely to be found. There are 124 bird species for which Nepal may hold significant proportions of the world populations, as their breeding distributions are restricted to an area encompassing the Himalaya, north-east India, northern South-East Asia and south-west China (Inskipp and Inskipp 1986, Inskipp 1989). As many as 38 of these (31% of the total) have been recorded within S.P.N.P., and a majority of these has been proved or are assumed to breed within the park (Table 1).

Nepal may be especially important for 36 breeding bird species because they either have particularly restricted ranges within the general area under consideration or have been described as uncommon or rare in the Indian subcontinent (Inskipp and Inskipp 1986, Inskipp 1989). Two of these have been recorded within the park: Wood Snipe *Gallinago nemoricola*, whose breeding status in the park is unknown, and White-throated Tit *Aegithalos niveogularis*, which is common and presumably breeds in the national park. Also, the Wood Snipe is listed as a breeding species at risk in Nepal (i.e. at a national level) (Inskipp 1989) and is recognised as internationally threatened (Collar and Andrew 1988).

The avifauna and conservation value of the major vegetation types within the park are described below. Table 2 lists for each type: numbers of breeding species, and numbers of breeding species with significant world populations in Nepal.

Table 2. Bird species proved or presumed to breed within Shey-Phoksundo National Park.

	1	2	3
Mixed deciduous forest	34	10	29
Oak/conifer forest	42	15	36
Himalayan scrub	21	8	38
Himalayan alpine meadows	33	3	9
Trans-Himalayan habitats	38	5	13

Key 1 = Number of breeding species
 2 = Number of breeding species with significant world populations in Nepal
 3 = % breeding species with significant world populations in Nepal

Mixed deciduous forest:

Mixed deciduous forests are found along the Suli Gad River between 2,700 and 3,500 m. At their best these forests are luxuriant with a wealth of tree species and a well developed understorey of bushes and saplings. Even though this vegetation type covers only a minor fraction of the total national park area, the number of breeding bird species compares favourably with that of other vegetation zones (Table 2). Future surveys in this vegetation type are likely to add more species to the park list, especially if done in late spring or early summer. Also, future surveys are likely to reveal that these forests are the most species-rich of all habitats within the park.

The high proportion of 29% of the total number of breeding species in this vegetation type may have significant world populations in Nepal. The most notable of these is the White-throated Tit.

Oak/conifer forest:

This vegetation type encompasses several different forest types and is named oak/conifer forest for simplicity. These different forests are similar in that they dominate below 3,900 m in most valleys in the Himalayan part of the national park. Exceptions are along the Suli Gad River where mixed deciduous forests dominate, in the vicinity of villages where forests have given place to cultivated land, and slopes with a southerly aspect presumed to be too dry to support forests. The forest type that dominates in a specific area is determined mainly by altitude and aspect.

The most prominent forest type consists of oak *Quercus semecarpifolia* mixed with different conifers typical of West Nepal like West Himalayan Spruce *Picea smithiana*, Himalayan Silver Fir *Abies spectabilis*, and Himalayan Blue Pine *Pinus wallichiana*. The forests vary from pure stands of oak to pure coniferous forests. Many of the forests are in excellent condition while others, mainly near villages, are affected by firewood collecting, by lopping for fodder (of *Quercus semecarpifolia*), and by domestic goats and yaks grazing the understorey. In Jagdula Khola we observed forest degradation mainly near trails. Further than 40-60 m from man-made trails the forests are usually only affected by grazing, presumably when herds of yaks and goats are taken to and from traditional grazing grounds, and to a small extent by firewood collection. It is not possible from a single study to estimate the rate of forest degradation, but we have a feeling that the present rate is rather low in most of the areas we surveyed.

Forests of Himalayan Birch *Betula edulis* (3,100-3,900 m) are common in Jagdula Khola and Garpung Khola. These forests are not badly affected by degradation, but some of them are badly infested with snare traps. The traps are made by local people, mainly to catch Himalayan Musk Deer and Himalayan Monal *Lophophorus impejanus*. The traps are operated from late spring until well into autumn when herders attending their herds of yaks and

goats are near the remote birch forests. It is estimated that the trapping is likely to take a heavy toll on local populations of Musk Deer and Himalayan Monal.

Shrubberies of rhododendron *Rhododendron* are found only on some hillsides with a northerly aspect and hence a more humid microclimate. Rhododendrons are far less common in S.P.N.P. compared to localities further east in Nepal.

As many as 36% of the breeding bird species in these forest types may have significant world populations in Nepal. Notable species are Himalayan Monal (Nepal's national bird) which despite trapping is a common sight in many birch forests, Green Shrike-Babbler *Pteruthius xanthochloris*, and two species with a limited distribution in the western Himalaya, the White-throated Tit and White-cheeked Nuthatch *Sitta leucopsis*.

Himalayan scrub:

The scrublands in the Himalayan part of the national park mainly consist of *Cotoneaster* and, in some places, of *Caragana*, as between Sumduwa and Ringmo.

Only 21 of the total number of species found within the park are likely to breed in this habitat. This low figure is partly due to the fact that scrublands in most places only cover relatively small areas, and partly to the fact that some scrublands, especially in the vicinity of traditional grazing grounds for livestock, are burned more or less regularly. Burning is not permitted within the park but is practiced to some extent by local people to enlarge existing grazing grounds.

The most exciting observation in this habitat was of two Wood Snipes flushed from low *Cotoneaster* scrub near a meandering stream in Pani Palta Khola. The species is scarce in Nepal (Inskipp and Inskipp 1991) though it has been recorded recently (Buckton and Morris 1993). The two birds were observed on 12 April, too early in the year to decide if they had only stopped on migration or intended to breed in Pani Palta Khola, where presumably suitable habitat exists.

Himalayan alpine meadows:

The extensive high-altitude meadows are a major asset of the national park. Compared to elsewhere in Nepal the meadows within S.P.N.P. are often in excellent condition, and they are the home of the Snow Leopard and its major prey the Bharal. Bharals are often seen in flocks numbering several dozens, while the secretive Snow Leopard is only seen on very rare occasions, even by local herders.

Despite the generally optimistic view of the condition of the meadows in the park, intense grazing by domestic yaks and goats is taking place in several areas, e.g. in Pani Palta Khola 260 yaks were crowded in the lower part of

the valley. The herders had taken the yaks the two-week-walk from the village of Saldang in the eastern part of the park to Pani Palta Khola, due to deteriorating grazing grounds near Saldang.

Intense grazing is likely to displace wild herbivores, as has presumably happened in Pani Palta Khola. Here the resident Bharals were only seen on the steep hillsides bordering the valley and never in the fertile valley bottom where the yak herd was grazing.

The birds classified as breeding in this habitat include a number of species which actually breed in nearby forests or on cliffs but depend on the grasslands for foraging. These include the Golden Eagle *Aquila chrysaetos* and Common Kestrel *Falco tinnunculus*, which feed on the abundant small and medium-sized mammals. The Upland Buzzard *Buteo hemilasius* may breed in S.P.N.P. but has not yet been proved to breed in Nepal.

Trans-Himalayan habitats:

About two-thirds of S.P.N.P. is situated north of the Himalaya proper. Here Tibetan or trans-Himalayan steppe and near-desert vegetation dominate, though some areas are virtually denuded of any vegetation. Large areas are wilderness areas with minimal human influence and with viable populations of Snow Leopards and Grey Wolves.

The avifauna shows a heavy influence from Tibet. Many of the species recorded in S.P.N.P. are widespread in Tibet but have a very limited distribution within Nepal like the Tibetan Partridge, Hill Pigeon *Columba rupestris*, Little Owl, Hume's Lark *Calandrella acutirostris*, Brown Accentor *Prunella fulvescens*, White-browed Tit-Warbler *Leptopoeile sophiae*, Tibetan Ground-Jay, and Black-winged Snowfinch *Montifringilla adamsi*. The great influence from the Tibetan avifauna makes it less surprising that only five species presumed to breed in this part of the park have a significant part of the world population in Nepal.

USE OF THE PARK BY PEOPLE AND MANAGEMENT PROBLEMS

About 2,000 people inhabit the villages scattered around the park. They practice subsistence farming based on livestock and growing mainly barley and potatoes. Living conditions in this harsh region are extremely rough, and the people of the northern villages only survive due to a century-old system of trading salt from the highlands of Tibet with grain from the Nepalese middle hills.

The number of people living inside the park is supplemented with people who move into the park with their livestock from the surrounding villages

in late April and May and remain until early autumn. During this period herders live in rock caves or tents on the grazing grounds.

In at least some villages, e.g. Hurikot just outside the park, livestock numbers have increased substantially in recent years. Though we did not observe any seriously degraded meadows during our survey, some grazing grounds appeared to be heavily grazed by livestock. Intensified grazing might have a considerable impact on these meadows; just south of the park we observed several landslides and an abundance of erosion gullies cut through the landscape.

The forests of S.P.N.P. are exploited far less than many others in Nepal. This is mainly because the park lies in the country's least populated zone. Not surprisingly, forests near villages are affected by firewood collection, but the high number of soldiers within the park, especially the 150 troops at Sumduwa Army Checkpost present a special problem because they take a toll on the nearby forests. The Department of National Parks and Wildlife Conservation (DNPWC) has started negotiations with the proper authorities to reduce the number of soldiers. The latter are a heavy burden on the DNPWC annual budget (the Department's financial allocation for 1990/1991 is NRs 142.3 million of which 84% is for protection units from the Royal Nepal Army (IUCN 1992)).

Hunting, mostly with traps, is taking place in Jagdula Khola (Priemé and Øksnebjerg 1992) and Namlang Khola in the north-western part of the park (Jackson 1979). Two types of traps, snares and poisoned bamboo spears, are used. The snares are usually found in narrow strips of high-altitude birch forest and are intended for Himalayan Musk Deer, the musk glands of which are worth a small fortune to local farmers. Also, Himalayan Monal and, occasionally, Common Goral *Naemorhedus goral* are trapped. Elaborate barriers made of branches and twigs cover the full width of the forest strips, making passage possible only through gates in the barriers where the snares are set. The poisoned bamboo spears are usually placed in very steep terrain near rivers or streams which Bharal and Goral frequent. The 60-100 cm long spears hidden in the vegetation are tipped with poison made from aconites *Aconitum* and can kill a full-grown Bharal weighing 40 kg or a Snow Leopard in a few minutes. Interviews with hunters inside and outside the park indicated the existence of a 'Tibetan connection' for wildlife products originating in western Nepal. Apparently, hunters are paid in advance by Tibetan traders for valuable products like gall bladders from Himalayan Black Bear *Selenarctos thibetanus* (fetching prices of NPs 9,000), and musk glands from Musk Deer. The Tibetans sell these products together with pelts from Snow Leopards and the bones from all major carnivores to Chinese working in Tibet who reportedly hope to make a profit when returning to a major Chinese city (e.g. Jackson 1991).

Until May 1989, S.P.N.P. was off-limit to foreigners. At that time the

Himalayan part of the national park was opened to tourists. In 1990 35 foreign tourists visited the national park. This number rose to 291 in 1991. As yet, tourism has not had a great impact on the park, but the number of tourists visiting the park is expected to rise substantially in future years. However, S.P.N.P. is remote even by Nepalese standards and tourism here will never reach the level of the most popular destinations in Nepal like Khumbu, the Annapurna region or Langtang. At present the park authorities are doing a fine job trying to keep tourist groups at special campsites while in the park. This substantially reduces the impact of tourist groups. Visitors to the park are required to be self-sufficient in fuel supplies but park regulations allow trekking crews to gather dead wood from the forest floor. To the best of our knowledge, no study on the impact of wood gathering has been carried out in Himalayan forest ecosystems. It is possible that intense wood gathering will change the number and diversity of insects and birds which are dependent on a rich forest floor litter. Another problem with wood gathering is that the borderline between dead wood and live wood is easily crossed. On several occasions we observed trekking crews cutting down branches of live trees and up-rooting entire live bushes for fuelwood or campfires.

Our major concern regarding tourism within S.P.N.P. is the recently opened trans-Himalayan part of the park. With its unique blend of Buddhist culture and remote wilderness, this part of the park acts like a new 'Shangri-La' on many foreign tourists visiting Nepal. Having becoming famous through Peter Mathiessen's novel, *The Snow Leopard*, the monasteries and the scenery at Shey are especially appealing to western tourists. But the trans-Himalayan habitats are extremely fragile and vulnerable to even a small number of tourists. Trees are very rare in this desert-like area and the regeneration of the *Caragana*/juniper scrub is exceedingly slow. Also, the large and conspicuous trekking groups might have disturbing effects on the shy Snow Leopard, and on its prey the Bharal. At present, Bharal can be approached within 5-20 m at Shey. Hopefully, the current high trekking fee for visiting Shey will restrain the number of tourists.

It is not within the scope of the present study, nor is it within our academic capacity, to investigate the socio-economic impact of tourism in the park, but it is likely that a steady flow of tourists will have a great impact on the culture and economy of the remote villages in the northern part of the national park. However, everything seems to have its own pace in Dolpo and, despite anticipated increases in numbers of livestock and tourists, S.P.N.P. will probably have untouched wilderness areas for years to come. The birds of S.P.N.P. are still inadequately studied throughout the year, so birdwatchers surveying at any season are likely to make valuable observations. Surveys in spring to locate breeding and wintering species of the lower forests would be especially worthwhile. Anyhow, the visiting birdwatcher will be rewarded with several western Himalayan and Tibetan specialities

which are difficult to see elsewhere in Nepal, along with the feeling of being in Snow Leopard territory - you never know when their flaming eyes are watching you.

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APPENDIX

A COMPLETE LIST OF BIRDS RECORDED IN
SHEY-PHOKSUNDO NATIONAL PARK

A = This survey

F = Fleming (1975, 1982)

H = Hillard (1989a and b)

J = Jackson (1978)

M = Mathiessen (1978)

P = Polunin (1952)

S = Schaller (1980)

Y = Yonzon (1991)

FHJ	SNOW PARTRIDGE <i>Lerwa lerwa</i> Uncommon resident.
A HJ	TIBETAN SNOWCOCK <i>Tetraogallus tibetanus</i> Uncommon in Himalayan part of N.P.
AFHJ P	HIMALAYAN SNOWCOCK <i>Tetraogallus himalayensis</i> Common around Shey and some other areas.
AFHJM	CHUKAR <i>Alectoris chukar</i> Resident.
FHJ	TIBETAN PARTRIDGE <i>Perdix hodgsoniae</i> Resident in trans-Himalayan habitat.
Y	KOKLASS PHEASANT <i>Pucrasia macrolopha</i> Resident.
A J P	HIMALAYAN MONAL <i>Lophophorus impejanus</i> Common in some areas like Jagdula Khola.
H	BAR-HEADED GOOSE <i>Anser indicus</i>
A	RUDDY SHELDUCK <i>Tadorna ferruginea</i>
S	TUFTED DUCK <i>Aythya fuligula</i> Uncommon visitor.
A	HIMALAYAN WOODPECKER <i>Dendrocopos himalayensis</i> Resident.
A	SCALY-BELLIED WOODPECKER <i>Picus squamatus</i> Resident.
F	EURASIAN HOOPOE <i>Upupa epops</i>
A	LITTLE GREEN BEE-EATER <i>Merops orientalis</i> One seen on 16 April 1992 near Toijam Rangerpost at 2,900 m in clearing in oak forest. This is the highest altitude for the species in Nepal (Inskipp and Inskipp 1991). The bird had probably 'overshot' on spring migration as 16 April falls within the migration period of the species (Inskipp and Inskipp 1991). Also, see notes about Large-tailed Nightjar.
F	COMMON CUCKOO <i>Cuculus canorus</i>
Y	LESSER CUCKOO <i>Cuculus poliocephalus</i>
J	HIMALAYAN SWIFTLET <i>Collocalia brevirostris</i>
J	ALPINE SWIFT <i>Tachymarptis melba</i>
AF	COMMON SWIFT <i>Apus apus</i> Fairly common around e.g. Shey.
AF	TAWNY OWL <i>Strix aluco</i> Common in forest in Himalayan part of N.P.
J	LITTLE OWL <i>Athene noctua</i>
J	SHORT-EARED OWL <i>Asio flammeus</i>
A	LARGE-TAILED NIGHTJAR <i>Caprimulgus macrurus</i> A single individual seen on 1 April 1992 at 3,100 m in mixed oak/pine forest above Toijam Rangerpost. This is the highest altitude record for the species in Nepal (Inskipp and Inskipp 1991). Though the species is found up to 2,200 m in the western Himalaya and 2,480 m in north-eastern India (Ali and Ripley 1985), this individual had probably 'overshot' while migrating. This is not the only lowland species recorded at an unusually high altitude within the national park; this study also found a Little Green Bee-eater <i>Merops orientalis</i> at 2,900 m, and Robert L. Fleming, Jr. (Fleming 1982) recorded a Hair-crested Drongo <i>Dicrurus hottentottus</i> at 4,100 m, both of them probably after a spring migration 'overshoot'.
F M	ROCK PIGEON <i>Columba livia</i>
AF JMP	HILL PIGEON <i>Columba rupestris</i> Common around Shey.
AFHJMPS	SNOW PIGEON <i>Columba leuconota</i> Common in most areas.
AF Y	SPECKLED WOOD-PIGEON <i>Columba hodgsonii</i> Only along Suli Gad River.
A P	ORIENTAL TURTLE-DOVE <i>Streptopelia orientalis</i> Common in Himalayan part of N.P.

A	COMMON CRANE <i>Grus grus</i> Migrant.
Y	COMMON COOT <i>Fulica atra</i>
A	WOOD SNIBE <i>Gallinago nemoricola</i> Two flushed from scrub near stream on 12 April 1992 in Pani Palta Khola at 4,100 m. The species is listed as a breeding species at risk in Nepal by Inskipp (1989), and there are only very few recent records of the species in Nepal (Inskipp and Inskipp 1991). The species is also recognised as internationally threatened (Collar and Andrew 1988).
A	IBISBILL <i>Ibidorhyncha struthersii</i> A single individual noted on 14 April in Pani Palta Khola at 3,800 m feeding along a small stream.
F P	BLACK-EARED KITE <i>Mitrus lineatus</i>
AFHJMPS	LAMMERGEIER <i>Cypaetus barbatus</i> Common resident in most areas.
F	EGYPTIAN VULTURE <i>Neophron percnopterus</i>
AFHJM	HIMALAYAN GRIFFON <i>Cyps himalayensis</i> Common resident in most areas.
A J	NORTHERN HARRIER <i>Circus cyaneus</i> Uncommon winter visitor.
AF J	EURASIAN SPARROWHAWK <i>Accipiter nisus</i> Not known if resident or a migrant.
A J	NORTHERN GOSHAWK <i>Accipiter gentilis</i> Not known if resident or a migrant.
AF	COMMON BUZZARD <i>Buteo buteo</i>
A Y	UPLAND BUZZARD <i>Buteo hemilasius</i> Resident.
Y	STEPPE EAGLE <i>Aquila nipalensis</i> Migrant.
AF JM	GOLDEN EAGLE <i>Aquila chrysaetos</i> Common resident in several areas.
A	BOOTED EAGLE <i>Hieraaetus pennatus</i> Uncommon summer visitor.
AFHJ P	COMMON KESTREL <i>Falco tinnunculus</i> Common in most areas.
F J	AMUR FALCON <i>Falco amurensis</i> Uncommon migrant.
J	MERLIN <i>Falco columbarius</i> Uncommon winter visitor.
A	LONG-TAILED SHRIKE <i>Lanius schach</i>
A P	GREY-BACKED SHRIKE <i>Lanius tephronotus</i>
F P	TIBETAN GROUND-JAY <i>Pseudopodoces humilis</i> A trans-Himalayan resident.
AF	SPOTTED NUTCRACKER <i>Nucifraga caryocatactes</i>
A JMP	RED-BILLED CHOUGH <i>Pyrrhocorax pyrrhocorax</i>
A HJ P	YELLOW-BILLED CHOUGH <i>Pyrrhocorax graculus</i> Common.
AFHJM P	LARGE-BILLED CROW <i>Corvus macrorhynchos</i> Common below 4,000 m.
AF JMPS	COMMON RAVEN <i>Corvus corax</i> Resident.
AFH	LONG-TAILED MINIVET <i>Pericrocotus ethologus</i> Common below 3,500 m.
AF	YELLOW-BELLIED FANTAIL <i>Rhipidura hypoxantha</i> Common in e.g. Jagdula Khola.
Y	ASHY DRONGO <i>Dicrurus leucophaeus</i>
F	HAIR-CRESTED DRONGO <i>Dicrurus hottentottus</i> Uncommon visitor.
AF	WHITE-THROATED DIPPER <i>Cinclus cinclus</i>
AF JM	BROWN DIPPER <i>Cinclus pallasi</i>
A	CHESTNUT-BELLIED ROCK-THRUSH <i>Monticola rufiventris</i>
FHJ	BLUE ROCK-THRUSH <i>Monticola solitarius</i>
AFH P	BLUE WHISTLING-THRUSH <i>Myiophonus caeruleus</i> Common below 4,100 m.
A	PLAIN-BACKED THRUSH <i>Zoothera mollissima</i>
A	TICKELL'S THRUSH <i>Turdus unicolor</i>
P	WHITE-COLLARED BLACKBIRD <i>Turdus albocinctus</i>
A HJ	DARK-THROATED THRUSH <i>Turdus ruficollis</i>
F J	MISTLE THRUSH <i>Turdus viscivorus</i>
AF Y	DARK-SIDED FLYCATCHER <i>Muscicapa sibirica</i>
A	RUSTY-TAILED FLYCATCHER <i>Muscicapa ruficauda</i>
A Y	RUFIOUS-GORGETED FLYCATCHER <i>Ficedula strophitata</i>
AF Y	ULTRAMARINE FLYCATCHER <i>Ficedula superciliosa</i>
F Y	SLATY-BLUE FLYCATCHER <i>Ficedula vicolor</i>
Y	VERDITER FLYCATCHER <i>Emmias thalassina</i>
AF J P	WHITE-TAILED RUBYTHROAT <i>Luscinia pectoralis</i> Common at e.g. Shey.
A P	INDIAN BLUE ROBIN <i>Luscinia brunnea</i> Common along Suli Gad River.
AF	ORANGE-FLANKED BUSH-ROBIN <i>Tarsiger cyanurus</i> Common in forests between 2,900 m and 4,000 m.
F	GOLDEN BUSH-ROBIN <i>Tarsiger chrysaeus</i>

Y	WHITE-BROWED BUSH-ROBIN <i>Tarsiger indicus</i>
A	RUFIOUS-BACKED REDSTART <i>Phoenicurus erythronotus</i> Uncommon winter visitor.
A H P	BLUE-CAPPED REDSTART <i>Phoenicurus caeruleocephalus</i> Common below 3,600 m.
AF MP	BLACK REDSTART <i>Phoenicurus ochrurus</i> Common in some places, e.g. near Shey.
A	HODGSON'S REDSTART <i>Phoenicurus hodgsoni</i> Probably only an uncommon migrant.
AF J	WHITE-THROATED REDSTART <i>Phoenicurus schisticeps</i> Uncommon resident?
A J	WHITE-WINGED REDSTART <i>Phoenicurus erythrogaster</i> Resident.
AF P	BLUE-FRONTED REDSTART <i>Phoenicurus frontalis</i> Common in most areas.
AFHJ P	WHITE-CAPPED WATER-REDSTART <i>Chaimarrornis leucocephalus</i> Common.
AF	PLUMBEOUS WATER-REDSTART <i>Rhyacornis fuliginosus</i> Uncommon.
AF	WHITE-BELLIED REDSTART <i>Hodgsonius phoenicuroides</i> Found in the trans-Himalayan part of the park.
A P	GRANDALA <i>Grandala coelicolor</i> Resident.
F J	LITTLE FORKTAIL <i>Enicurus scouleri</i> Uncommon resident.
AF P	SIBERIAN STONECHAT <i>Saxicola maura</i> Common near Shey.
AF Y	GREY BUSHCHAT <i>Saxicola ferrea</i>
AF	DESERT WHEATEAR <i>Oenanthe deserti</i> Uncommon in trans-Himalayan habitats.
H	BRAHMINY STARLING <i>Sturnus pagodarum</i>
F	KASHMIR NUTHATCH <i>Sitta cashmirensis</i> Uncommon resident.
F P	WHITE-CHEEKED NUTHATCH <i>Sitta leucopsis</i> Resident.
A H P	WALL-CREEPER <i>Tichodroma muraria</i>
A	EURASIAN TREECREEPER <i>Certhia familiaris</i> Resident.
AF	BAR-TAILED TREECREEPER <i>Certhia himalayana</i> Common resident.
AF JMP	WINTER WREN <i>Troglodytes troglodytes</i> Common below 4,500 m.
AF	DARK-GREY TIT <i>Parus rufonuchalis</i>
AF P	RUFIOUS-VENTED TIT <i>Parus rubidiventris</i> Common resident.
A HJP	BLACK-CRESTED TIT <i>Parus melanolephus</i> Common resident.
A P	GREY-CRESTED TIT <i>Parus dichrous</i>
A Y	GREEN-BACKED TIT <i>Parus monticolus</i> Resident.
A	BLACK-THROATED TIT <i>Aegithalos concinnus</i> Uncommon resident.
AFH P	WHITE-THROATED TIT <i>Aegithalos niveogularis</i> Common in forests below 3,800 m.
AFH P	EURASIAN CRAG-MARTIN <i>Hirundo rupestris</i> Common in most areas.
AF Y	ASIAN HOUSE-MARTIN <i>Delichon dasypus</i> Common in most areas.
AF	GOLDCREST <i>Regulus regulus</i>
Y	HIMALAYAN BULBUL <i>Pycnonotus leucogenys</i> Only along Suli Gad River.
A Y	BLACK BULBUL <i>Hypsipetes leucocephalus</i> Only along Suli Gad River.
A J	STRIATED PRINIA <i>Prinia criniger</i>
Y	ORIENTAL WHITE-EYE <i>Zosterops palpebrosus</i>
F	BROWNISH-FLANKED BUSH-WARBLER <i>Cettia foripes</i>
F	GREY-SIDED BUSH-WARBLER <i>Cettia brunifrons</i>
A	BOOTED WARBLER <i>Hippolais caligata</i> Uncommon migrant.
AFH	WHITE-BROWED TIT-WARBLER <i>Leptopoecile sophiae</i> A trans-Himalayan resident.
AFH	TICKELL'S LEAF-WARBLER <i>Phylloscopus affinis</i> Common around Shey.
A	SULPHUR-BELLIED WARBLER <i>Phylloscopus griseolus</i> Uncommon migrant.
F Y	BUFF-BARRED WARBLER <i>Phylloscopus pulcher</i>
AF	PALE-RUMPED WARBLER <i>Phylloscopus chloronotus</i> Common below 3,600 m.
AF	INORNATE (YELLOW-BROWED) WARBLER <i>Phylloscopus inornatus</i> Common below 3,600 m.
AF	GREENISH WARBLER <i>Phylloscopus trochiloides</i>
A Y	LARGE-BILLED LEAF-WARBLER <i>Phylloscopus magnirostris</i>
A H Y	BLYTH'S LEAF-WARBLER <i>Phylloscopus reguloides</i>
F	GOLDEN-SPECTACLED WARBLER <i>Seicercus burkii</i>
AF Y	GREY-HOODED WARBLER <i>Seicercus xanthoschistos</i>
AFH?	STREAKED LAUGHING-THRUSH <i>Garrulax lineatus</i> Common resident in some areas.
A J P	VARIEGATED LAUGHINGTHRUSH <i>Garrulax variegatus</i> Common resident in some areas.
A	GREEN SHRIKE-BABBLER <i>Pteruthius xanthochloris</i> Uncommon resident.

AF	WHITE-BROWED FULVETTA <i>Alcippe vinipectus</i>
F	GREATER SHORT-TOED LARK <i>Calandrella brachydactyla</i>
F J	HUME'S LARK <i>Calandrella acutirostris</i>
A J	ORIENTAL SKYLARK <i>Alauda gulgula</i>
AF P	HORNED LARK <i>Eremophila alpestris</i> Common near Shey.
Y	FIRE-BREASTED FLOWERPECKER <i>Dicaeum ignipectus</i>
AF	MRS. GOULD'S SUNBIRD <i>Aethopyga gouldiae</i>
F Y	GREEN-TAILED SUNBIRD <i>Aethopyga nipalensis</i>
J	HOUSE SPARROW <i>Passer domesticus</i>
AF P	RUSSET SPARROW <i>Passer rutilans</i>
F P	EURASIAN TREE SPARROW <i>Passer montanus</i>
AF JM	BLACK-WINGED SNOWFINCH <i>Montifringilla adamsi</i> A trans-Himalayan resident.
AFH P	WHITE WAGTAIL <i>Motacilla alba</i> Common in some areas.
A	CITRINE WAGTAIL <i>Motacilla citreola</i> Migrant.
AFH	GREY WAGTAIL <i>Motacilla cinerea</i>
AF Y	OLIVE-BACKED PIPIT <i>Anthus hodgsoni</i> Common in e.g. Jagdula Khola.
AF	ROSY PIPIT <i>Anthus roseatus</i> Common on alpine meadows in most areas.
AY	UPLAND PIPIT <i>Anthus sylvanus</i> Uncommon.
AF J	ALPINE ACCENTOR <i>Prunella collaris</i> Common in several areas.
A	RUFIOUS-STREAKED ACCENTOR <i>Prunella himalayana</i> Uncommon winter visitor.
AF JM	ROBIN ACCENTOR <i>Prunella rubeculoides</i> Common near Shey.
AF P	RUFIOUS-BREASTED ACCENTOR <i>Prunella strophciata</i> Common in many areas between 3,500 m and 4,500 m.
AF J	BROWN ACCENTOR <i>Prunella fulvescens</i> Common near Shey.
J	BLACK-THROATED ACCENTOR <i>Prunella atrogularis</i> Uncommon winter visitor.
A	CHAFFINCH <i>Fringilla coelebs</i> Uncommon winter visitor.
F J	FIRE-FRONTED SERIN <i>Serinus pusillus</i>
F M Y	YELLOW-BREASTED GREENFINCH <i>Carduelis spinoides</i>
FH	EUROPEAN GOLDFINCH <i>Carduelis carduelis</i>
F J	TWITE <i>Carduelis flavirostris</i>
AF J S	PLAIN MOUNTAIN-FINCH <i>Leucosticte nemoricola</i> Common in open habitat.
AF J P	BLACK-HEADED MOUNTAIN-FINCH <i>Leucosticte brandti</i>
AF J	COMMON ROSEFINCH <i>Carpodacus erythrinus</i>
AF	BEAUTIFUL ROSEFINCH <i>Carpodacus pulcherrimus</i> Common in many areas.
AF Y	PINK-BROWED ROSEFINCH <i>Carpodacus rodochrous</i>
A	WHITE-BROWED ROSEFINCH <i>Carpodacus thura</i> Uncommon.
AF	STREAKED ROSEFINCH <i>Carpodacus rubicilloides</i> Common at e.g. Shey.
F S	GREAT ROSEFINCH <i>Carpodacus rubicilla</i> High-altitude resident.
AFJ P	RED-FRONTED ROSEFINCH <i>Carpodacus puniceus</i> A high-altitude resident. Common in some areas.
AF	RED-HEADED BULLFINCH <i>Pyrrhula erythrocephala</i>
P	COLLARED GROSBEAK <i>Mycerobas affinis</i> Uncommon.
AF J	WHITE-WINGED GROSBEAK <i>Mycerobas carripes</i>
H	SPOT-WINGED GROSBEAK <i>Mycerobas melanozanthos</i>
A J	PINE BUNTING <i>Emberiza leucocephalos</i> An uncommon winter visitor.
A H J P	ROCK BUNTING <i>Emberiza cia</i> Common.
A	LITTLE BUNTING <i>Emberiza pusilla</i> Uncommon winter visitor.