

BARSEY RHODODENDRON SANCTUARY



IBA Site Code	:	IN-SK-01
State	:	Sikkim
District	:	West Sikkim
Coordinates	:	27° 11' 39" N, 88° 07' 06" E
Ownership	:	State Forest Department
Area	:	10,400 ha
Altitude	:	2,000 – 4,100 m
Rainfall	:	>250 cm
Temperature	:	Not Available
Biogeographic Zone	:	Himalaya
Habitats	:	Subtropical Dry Evergreen, Subtropical Broadleaf Hill Forest, Alpine Moist Scrub

IBA CRITERIA A1 (Threatened Species), A2 (Endemic Bird Area 130: Eastern Himalayas);
A3 (Biome-5: Eurasian High Montane; Biome-7: Sino-Himalayan Temperate Forest)
PROTECTION STATUS Wildlife Sanctuary, established in 1998

GENERAL DESCRIPTION

The 104 sq. km Barsey Rhododendron Sanctuary forms a vital corridor connecting the Khangchendzonga Biosphere Reserve (KBR) to its north with the Singalila National Park of West Bengal to its south. Five forest types are seen in this site: Subtropical Moist Deciduous Forests (2,200-2,400 m); Wet Temperate Forests (2,400-2,700 m); Moist Temperate Forests (2,700-3,250 m); Sub-alpine Forests (3,250-4000 m), and Alpine meadows (>4,000 m) (Sharma 2001). These diverse forest types shelter a wide range of faunal elements. This Sanctuary harbours some pure stands of Rhododendron, the dominant genus favored by the wet and cold climate along the Singalila Range and a variety of epiphytic orchids, ferns, mosses and lichens. Meadows take over from above 4,000 m and are rich in medicinal plants.

AVIFAUNA

This is an important IBA on the southeast corner of Sikkim with Nepal as its western border and contiguity with KBR and Singalila, stretching from alpine meadows down to subtropical forests. Birds from biomes 5, 7, 8 and 9 have been recorded here including at least three globally threatened species, two restricted range species, five out of 48 Biome-5 species, 38 out of 112 Biome-7 species, 21 out of 96 Biome-8 species and three out of 19 Biome-9 species. However, much more research input is needed (U. Lachungpa pers. comm. 2003). During a brief survey in September 1996, Biome-7 birds such as White-browed Tit-Babbler *Alcippe vinipectus*, Rufous Sibia *Heterophasia capistrata*, Grey-faced Leaf-Warbler *Phylloscopus maculipennis*, Orange-gorgeted Flycatcher *Ficedula strophliata*, Rufous-bellied Niltava *Niltava sundara*, Rufous-bellied Crested Tit *Parus rubiventris* and Red-headed Bullfinch *Pyrrhula erythrocephala* were ringed with BNHS rings (Ganguli-Lachungpa 1996).

Vulnerable

Pallas's Fish-Eagle	<i>Haliaeetus leucoryphus</i>
Rusty-bellied Shortwing	<i>Brachypteryx hypertyra</i>
Black-breasted Parrotbill	<i>Paradoxornis flavirostris</i>

Endemic Bird Area- 130: Eastern Himalayas

Rusty-bellied Shortwing	<i>Brachypteryx hypertyra</i>
Hoary-throated Barwing	<i>Actinodura nipalensis</i>

Biome-5: Eurasian High Montane (Alpine and Tibetan)

Snow Partridge	<i>Lerwa lerwa</i>
Snow Pigeon	<i>Columba leuconota</i>
Hodgson's Redstart	<i>Phoenicurus hodgsonii</i>
Wallcreeper	<i>Tichodroma muraria</i>
Yellow-billed Cough	<i>Pyrrhocorax graculus</i>

Biome-7: Sino-Himalayan Temperate Forest

Common Hill-Partridge	<i>Arborophila torqueola</i>
Blood Pheasant	<i>Ithaginis cruentus</i>
Satyr Tragopan	<i>Tragopan satyra</i>
Himalayan Monal	<i>Lophophorus impejanus</i>
Speckled Wood-Pigeon	<i>Columba hodgsonii</i>
Darjeeling Pied Woodpecker	<i>Dendrocopos darjellensis</i>
Nepal House-Martin	<i>Delichon nipalensis</i>
Greater Long-billed Thrush	<i>Zoothera monticola</i>
White-collared Blackbird	<i>Turdus albocinctus</i>
Streaked Laughingthrush	<i>Garrulax lineatus</i>
Black-faced Laughingthrush	<i>Garrulax affinis</i>
Greater Scaly-breasted Wren-Babbler	<i>Pnoepyga albiventer</i>
Green Shrike-Babbler	<i>Pteruthius xanthochlorus</i>
Bar-throated Minla	<i>Minla strigula</i>
Red-tailed Minla	<i>Minla ignotincta</i>
White-browed Tit-Babbler	<i>Alcippe vinipectus</i>
Rufous Sibia	<i>Heterophasia capistrata</i>
Rufous-vented Yuhina	<i>Yuhina occipitalis</i>
Great Parrotbill	<i>Conostoma oemodium</i>
Fulvous-fronted Parrotbill	<i>Paradoxornis fulvifrons</i>
Grey-faced Leaf-Warbler	<i>Phylloscopus maculipennis</i>
Ferruginous Flycatcher	<i>Muscicapa ferruginea</i>
Slaty-backed Flycatcher	<i>Ficedula hodgsonii</i>
Orange-gorgeted Flycatcher	<i>Ficedula strophliata</i>
Rufous-bellied Niltava	<i>Niltava sundara</i>
Rufous-fronted Tit	<i>Aegithalos iouschistos</i>
Fire-capped Tit	<i>Cephalopyrus flammiceps</i>
Rufous-bellied Crested Tit	<i>Parus rubiventris</i>
Brown Crested Tit	<i>Parus dichrous</i>

Bio-me- 7: Si no- Hi mal ayan Temperate Forest

Green-backed Tit	<i>Parus monticolus</i>
White-tailed Nuthatch	<i>Sitta himalayensis</i>
Rusty-flanked Tree-Creeper	<i>Certhia nipalensis</i>
Fire-tailed Sunbird	<i>Aethopyga ignicauda</i>
Dark-breasted Rosefinch	<i>Carpodacus nipalensis</i>
Brown Bullfinch	<i>Pyrrhula nipalensis</i>
Red-headed Bullfinch	<i>Pyrrhula erythrocephala</i>
Gold-naped Black Finch	<i>Pyrrhoptes epauletta</i>
Yellow-billed Blue Magpie	<i>Urocissa flavirostris</i>

OTHER KEY FAUNA

Notable mammals include Leopard *Panthera pardus*, Leopard Cat *Prionailurus bengalensis*, Yellow-throated Marten *Martes flavigula*, Masked Palm Civet *Paradoxurus hermaphroditus*, Goral *Nemorhaedus goral*, Barking Deer *Muntiacus muntjak*, Asian Black Bear *Ursus thibetanus*, Red Panda *Ailurus fulgens*, Crestless Porcupine *Hystrix brachyura*, and Himalayan Mouse-Hare *Ochotona roylei*. There are unconfirmed records of the Tibetan Wolf *Canis lupus chanco* and Wild Dog *Cuon alpinus*. Research is also needed on the herpetofauna and invertebrates of this IBA.

LAND USE

- q Forestry
- q Nature conservation and research
- q Eco-tourism and recreation

THREATS AND CONSERVATION ISSUES

- q Livestock grazing
- q Poaching, collection of medicinal plants
- q Recreation and tourism

Threats to forests in this IBA are yak and cow sheds, shepherds' activities, tree felling in forests, firewood and fodder collection, cattle trade from Nepal and landslides. Yak grazing was not a traditional activity but was started by foreign nationals from Nepal, with yak sheds multiplying from 1975 onwards. More

than the yaks, it is the caretaker who causes maximum damage through firewood collection, lopping of trees for fodder, smuggling of medicinal plants, hunting and trapping wild animals. In spring (March), once the snow starts melting, these graziers perform transhumance to the higher summer grazing grounds, moving in the peak monsoons along the traditional migration routes and camping in temporary yak sheds. Before the first snow arrives in November, they move back loaded with dairy products.

The areas adjacent to the yak sheds and their migration route are heavily overgrazed and consequently degraded (Tambe 2001). There is proliferation of unpalatable species around these sheds, namely *Potentilla peduncularis*, *Meconopsis paniculata*, and *Caltha palustris* in the alpine regions and *Rumex nepalensis*, *Berberis* and *Rosa* in the temperate regions.

The main cause of concern is the intensive, localized collection of firewood from the forests adjoining the yak sheds. At these altitudes, firewood is the only source of energy, which is met mostly from the slow growing *Rhododendron* shrubbery and *Junipers*. The graziers, especially the sheep graziers, indulge in trapping of the pheasants and wild mammals. The sheep dogs which are of immense utility to the graziers in rounding up the livestock are let loose during the night. They cause depredation of the pheasants, other ground nesting birds and their nestlings. Even small mammals are not spared. This has resulted in the wildlife becoming very shy, and as a result sightings are rare. Hence, though grazing per se may not be that damaging, the allied activities involved have highly deleterious impact on the biodiversity values of the Singalila Range that comprise this IBA.

Controlled tourism and livestock husbandry are the only two economic activities ecologically feasible in this region. Conventionally 'Eco-development' is carried out outside the sanctuary facilitated by the State Forest Department and aims at reducing the negative dependencies of the local communities on the natural resources of the sanctuary, the logic behind this approach being improving the socioeconomic status of the "High Impact Group". In the context of Barsey *Rhododendron* Sanctuary, the graziers constitute the "High Impact Group" and stay right within the sanctuary for all the twelve months of the year. Considering the kind of hardships they have to undergo in this tough terrain and inclement weather, most of them are eager to shift out to other alternate livelihoods. Some kind of capacity building and institutional support needs to be provided to these poor graziers as an alternative. Removing these graziers in a phased manner, employing a participatory approach, would be the biggest contribution to the well being of this unique ecosystem (Sharma 2001). This was attempted since 2001 and the State Forest Department has recently successfully removed cattle sheds from the Sanctuary (Sandeep Tambe pers. comm. 2003).

KEY CONTRIBUTORS

Sandeep Tambe and Usha Lachungpa

KEY REFERENCES

Ganguli-Lachungpa, U. (1996) Baseline Bird Survey in Proposed Kitam Wildlife Sanctuary and other low-land forests of South Sikkim. Report submitted to Oriental Bird Club (Unpublished).

Sharma, T. R. (2001) Eco-Development of Barsey *Rhododendron* Sanctuary (Unpublished). Department of Forests, Environment and Wildlife, Government of Sikkim.

Tambe, S. (2001) Grazing in the Singalila Range, West Sikkim: A Detailed Report. Unpublished report to the State Forest Department, Government of Sikkim.

Yellow-billed Cough *Pyrrhocorax graculus* of Biome-5: Eurasian High Montane is commonly seen in this IBA



Photo: Otto Pfister