

SRI GURU NANAK DEV KHALSA COLLEGE
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Project Report
on

**Animal species
Of LADAKH**



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Teacher's signature

Introduction

Ladakh represents the westernmost extension of the vast Tibetan Plateau, covering an altitude range from 2700 to 7650 m.

Two major mountain chains, the mighty Himalayas and the Karakoram, demarcate its natural borders towards the south and the north respectively, with the Zaskar and Ladakh ranges running through it cut by the flow of the Indus. It constitutes over 80% of the Trans-Himalayan tract in India and is a home to a unique assemblage of flora and fauna.

The region is also known as a cold-desert and is characterized by severe, arid conditions. Temperature may drop to -40°C in the long winter months between December - April and may rise to 35°C in the short summer season from July - August. The vegetation in the region is sparse and productivity peaks only in the short summer season.

This harsh environment is thus home to only highly adaptable flora and fauna.

Several species of mammals are found in the region, such as :-

Common Name	Scientific Name
1 Blue sheep	<i>Pseudois nayaur</i>
2 Tibetan Argali	<i>Ovis ammon hodgsoni</i>
3 Tibetan wild Ass	<i>Equus kiang</i>
4 Himalayan Marmot	<i>Marmota himalayana</i>
5 Red Fox	<i>Vulpes vulpes</i>
6 Tibetan Gazelle	<i>Procapra picticaudata</i>
7 Snow Leopard	<i>Uncia</i>
8 Lynx	<i>Lynx isabellina</i>
9 Tibetan Wolf	<i>Canis lupus chanco</i>
10 Tibetan Antelope	<i>Pantholops hodgsoni</i>
11 Wild Yak	<i>Bos grunniens</i>

Ladakh, dotted with some of the world's most unique and spectacular wetlands, also holds the distinction of being the only known breeding ground of Black-necked Crane (*Grus nigricollis*) in India.

Most of these wetlands are of glacial origin and remain frozen from December to March.

A unique tent dwelling tribe, the Changpas, move around the wetlands of Ladakh in search of pastures. Several species of birds also use these wetlands as their breeding grounds, such as

Common Name	Scientific Name
1 Bar-headed goose	<i>Anser indicus</i>
2 Black-necked crane	<i>Grus nigricollis</i>
3 Brown-headed Gull	<i>Larus brunicephalus</i>
4 Great-Crested Grebe	<i>Podiceps cristatus</i>
5 Ruddy shelduck	<i>Tadorna ferruginea</i>
6 Lesser sand Plover	<i>Charadrius mongolus</i>

BIRDS OF LADAKH

Ladakh is a bird watcher's paradise. Some of the birds endemic to high altitude and cold temperate climates can only be found in Ladakh. Birds species typical of the Palearctic and the Indo-Malayan Zoogeographic regions (Ladakh lies on the border between these two regions) have been documented. Also, eastern Ladakh lies within the home range of characteristic Tibetan bird species. Till date more than 300 avifaunal species have been recorded in Ladakh. The unique habitat is an important breeding and feeding ground for birds during the short and dry summer months. It also serves as an important staging ground for birds while they are crossing the mighty Himalayan range during the spring and winter migrations.

On the basis of the time of occurrence, four bird groups have been identified in Ladakh and they are :-

Resident birds - This group comprises of

species adapted to high altitudes. They breed in summer primarily at very high elevations and retreat to the lower valley bottoms during the harsh winter months.

2. Summer visiting birds - Arriving in huge numbers from the South Asian plains and the Tibetan plateau, these birds use the high-altitude steppes, wetlands, meadows and fields as breeding grounds. During April and May. As winter arrives, they return to their warmer wintering areas.

3. Wintering birds - October marks the arrival of the smallest group of birds from northern breeding grounds. Due to the harsh weather conditions, they are mainly found around villages and along the valley bottoms (especially near the Indus borders and sunny areas). They are known to return to their breeding ground in the months of April-May.

4. Migrant birds - This group is considered to be the largest and most diverse of all four. These birds can be observed for a short period of time in the region during the spring and autumn migrations. migratory birds

frequent the central and eastern regions of Ladakh more than the western region.

A list of the bird species recorded is as follows:

1. BLACK-NECKED CRANE



image 1

Scientific Name (*Grus nigricollis*)

Local Name (Cha Thung Thung Karimo)

Habitat :- High altitude marshes are the most common wetlands types where the bird breeds. These wetlands with small mounds provide an excellent habitat to the birds for breeding. The marshes range from 4000 to 4800 m. above sea level. Rice and potato fields are the excellent wintering habitat for the species.

Distribution in Ladakh :- The bird can be sighted in the wetlands in eastern Ladakh. Typical area of encounter are Isokar, Luga, Staklung, Harla, Chushul, and some other wetlands.

2. BAR-HEADED GOOSE



Scientific Name :- *Anser indicus*

Local Name :- Nangpa

Habitat :- The bird breeds on high altitude freshwater as well as saline lakes. It also breeds in marshes and rivers in high altitude areas. It is a nocturnal feeder in grasslands near wetlands and riverbanks, sometimes it also feeds in the agricultural fields especially of wheat and barley.

General Distribution :- The bird breeds in the uplands of Central Asia. In India it breeds in high altitude wetlands in Changthang region of Ladakh. The bird mainly moves to low-lying areas of India in non-breeding period. Within the state of Jammu & Kashmir major wintering flocks are found in Gharana wetland in Jammu & Hokorsa wetland in Kashmir region.

Distribution in Ladakh :- During summer season the bird can be easily sighted at Tsokar, Tromprizi, Hanle, Chushul and along upper Indus Basin.

3. BLACK-TAILED GODWIT



image3

Scientific Name :- *Limosa*

Local Name :- Thingril Tognak

Habitat :- Mostly found in fresh water lakes, shallow banks of rivers and reservoirs. Sometimes also found in brackish lagoons, tidal waters and coastal salt pans.

Distribution in Ladakh :- It can be sighted at Hanle, Tsigul, Tso, Tsokar and some other areas in eastern Ladakh.

4. BEARDED VULTURE



image4

Scientific Name: *Gypaetus Barbatus*
Local Name: Skiaklag, Tangcar

Habitat: Bearded vulture mainly found in Towns, villages and city outskirts, especially around rubbish dumps and slaughter houses.

Distribution in Ladakh: It can be sighted at Hanle, Chushul, Tsokar, Puga, Lungparma, Nyoma, Loma, Suru and Zaskar.

5. HOOPOE



image5

Scientific Name: *Upupa epops*

Local Name: Hutukubay, Ubu-Jutse

Habitat: Open country, lightly wooded areas, cultivated land and villages. Prefers areas where there is some grass or herbs.

Distribution in Ladakh: This bird can be sighted in almost all the valleys of Ladakh.

WILD-ANIMALS OF LADAKH

Ladakh region comes under the Biogeographic Zone 1A - the Trans Himalayas. Ladakh has several species which are endemic to the region. As Ladakh is high altitude cold desert region, distinct species of mammals are found in Ladakh. Wild animal species of the region which includes some endangered species roaming freely in their natural habitat can be spotted and are as follows:

1. SNOW-LEOPARD



image6

Scientific Name: *Uncia*
Local Name: Shan

Habitat: The Snow Leopard is nocturnal and very elusive. They are found singly, inhabiting the most inaccessible terrain of rugged mountain ridges and gullies. Due to its camouflage and secretive habits it is very difficult to spot. It is also called 'Grey Ghost'. Hemis National Park is the best place to view this 'Grey Ghost'.

Distribution: Snow-leopard is found in the mountainous region of Central Asia. It is encountered throughout Ladakh, mostly in the south and central regions between 3000 and 5000m. Hemis National Park and Zaskar valley, Markha valley are the best place to view shangku (snow-leopard).

Its estimated population throughout Ladakh region is around 250-350 animals. Throughout its entire range the estimated population of snow-leopard is 7000 individuals.

Endangered species:

Snow-leopard listed as Endangered in the IUCN Red list of Threatened Animals, under Appendix I in CITES and under Schedule I in the Jammu and Kashmir wildlife (Protection) Act, 1978.

2. YAK



image7



image8

Scientific Name: *Bos Grunniens*
Local Name: Dong

Habitat: The Yak lives in groups, living mostly in sexually separated herds. Yak is found in the coldest, most desolate and rugged snow covered terrains of the Indian Himalaya. Yak is one of the highest dwelling animals of the world. Yak is domesticated by local peoples of Ladakh, wild yaks migrate seasonally to the lower plains to eat grasses and herbs. when it gets too warm, they retreat to higher plateaus to eat mosses and lichens.

Distribution: Yak is distributed in Trans-Himalayan ranges, plateau of Tibet. In Ladakh it has been reported from Chagthang valley at an altitude between 4320-6000m. The estimated population in Ladakh is around 40 to 50 animals. The estimated population throughout its range is 15000 animals.

Endangered species: The Yak is listed as vulnerable under IUCN Red list of Threatened Animals, under Appendix I in CITES and schedule II in the Jammu & Kashmir Wildlife (Protection) Act, 1978.

3 TIBETAN WILD ASS



image9

Scientific Name: *Equus Kiang*
Local Name: Kiang

Habitat: The Kiang occupies high biotopes in Trans-Himalayan cold desert often near marshes or wetlands between 4000 and 5200m. It lives in groups of sexually separated herds. The Kiang grazes throughout the day.

Distribution: Tibetan wild Asses found widely in eastern Ladakh (Tso Kar and Tso Mavi area) and in some parts of Central Ladakh such as Markha valley. It is listed as a vulnerable species.

Endangered species: Kiang is listed under Appendix II of CITES, under schedule I of the Jammu and Kashmir wildlife (Protection) Act, 1978 and as Vulnerable under IUCN Red list of Threatened Animals.

THREATS FACED BY MAMMALS OF LADAKH

Ladakh, like any other high-altitude desert in the world, has a very fragile ecosystem which is being threatened by unplanned and unregulated developmental and tourism activities. Since Ladakh opened its doors to tourists in 1970, many tourists from all over the world were attracted by the beautiful region located in the north-west Himalayas sharing its boundaries with Pakistan, Tibet, Lhakul and spiti to its south and the Kashmir to the west.

The unregulated tourism activities near the wetlands are becoming a major threat to the breeding birds.

This is causing more damage as the peak period of biological activity in Ladakh coincides with the peak tourism season.

The followings are the threats to habitat and wildlife in Ladakh areas :-

1. Human Activities :-

The government and Indian Army have inadvertently improved access in Ladakh, particularly throughout Changthang and Rupshu. Motorable tracks have been laid even in extremely remote areas for obvious strategic reasons. This by itself

has not had any detrimental effect on the environment. However, road construction work has initiated new development activities in the remotest areas.

Encouraging Tibetan refugees to settle at Anako is directly creating new threats and disturbances in the area.

The Tibetan refugee settlement there has grown in size and numbers thanks to generous foreign aid.

The once extensive marsh, drained for agriculture, has shrunk considerably.

2. Mass Tourism :-

As Ladakh is experiencing mass tourism, the increasing number of tourists coming to Ladakh, trekking and off-roading in some regions affects the soil, ungulates and marmots alike.

Any little disturbance in the ecosystem has an impact on the whole system.

Another issue with unregulated mass tourism is the increasing number of unverified tour operators and campsites. Such campsites do not take into account the environment factor and indulge in improper waste disposal.

We all are trying hard to keep Ladakh away from plastics free, and for that use of plastic bags are completely banned from 2009. This action was taken by local

women's group namely called 'Ama Tsokpa'.

3. Dogs :- The biggest threats to wild animals in Ladakh are free ranging dogs. The populations of these dogs have been growing exponentially over the last decade. There are organizations working to reduce the menace of stray dogs, although they focus primarily on sterilization, considered by them to be the most effective solution. The dogs represent the biggest threat to the black-necked crane population of Ladakh.

4. Livestock take over pastures and marshes :- An age-old system of rotational grazing was being practised in Ladakh since along. This practice protected the pastures from being overgrazed, besides helping conserve fodder for lean winter months. This system kept the disturbance to the black-necked crane's breeding habits within reasonable limits. Limited livestock grazing activity also helps to - up - turn the soil near the droppings and sustains a variety of micro-fauna, thus improving the food availability in the crane's foraging areas. Cranes have been observed pecking at, turning livestock dung. These causes the declining numbers of wild animals in Ladakh haven't research

adequately. Overgrazing and Competition with domestic sheep and goats have been implicated as the primary reason for the declining population of several wild animals like Tibetan wild Asses, Tibetan gazelle etc. If the current rate of population growth of domestic livestock continues, then the entire grazing system in the region might collapse, leading to desertification.

Conservation Actions

Ladakh is famous not only in India but across the globe for its unique wildlife and its Trans-Himalayan landscape. The following are the conservation actions for wildlife in Ladakh:

1. Awareness programs :

workshops / awareness programs are operated to educate people about wildlife importance and its role of wildlife in maintaining an ecological balance in the region.

There are many non-profit organisations who are working just to save the endangered mammals like Snow-leopard, Black-necked crane, Tibetan wild Asses (Kyang).

The only way to protect our unique species is to work together and to raise more awareness.

2. Hemis National Park

Hemis High Altitude National Park is located in the eastern part of Ladakh in North India. Hemis high altitude national park has the distinction of being the largest national park in South Asia. Hemis national park is the highest density of thorn in any protected area in the world.

Hemis High Altitude National Park. About 1,600 people live in the six villages, Rumbak, Khays, sku, shingo, Urutse, and chilling, located within the confines of the park. Many support themselves by raising livestock. This has made protecting the protected animals challenging.

a) wildlife in Hemis High Altitude National Park

This park is protected home for endangered animals like Asiatic ibex, snow-leopard, Tibetan wolf, the Eurasian brown bear and the red fox.



image 10

looking for leopards, winter snow leopard sighting at Rumbak valley. Luckily I spotted two grey ghost (snow-leopard) photo from year 2020

The Hemis national park boasts around 200 leopards and is the only habitat of shapu or the Ladakhi wolf in India.

b) Bird-watching in (H.H.A.N.P)

Hemis High Altitude National Park is the perfect destination for birds - Snow, Golden eagle, Himalayan griffon vulture, Lammergeier vulture, Tibetan snow finch, robin accentor, brown accentor, Tickell's and streaked-leaf warbler, fork-tailed swift, fire-fronted serin, Himalayan snowcock, chukar, red-billed chough. These birds can be found.

3. Changthang cold Desert Wildlife Sanctuary:

Changthang wildlife sanctuary in Ladakh is spread over an enormous area of approximately 1,600 sq. km. Changthang wildlife sanctuary has more than 200 species of wild animals and birds. Changthang is a barren land with just a little vegetation and water. It is assumed that there were 300-odd species of birds, including both resident and migrant. Again it is a best destination for bird watchers. Species like black-necked crane and Kyang can be only found in Changthang wildlife sanctuary and black-necked crane and ruddy shelduck breed in the area's wetlands.



image11

Scenic view of changthang where changpass live.

4. Karakoram (Nubra Shyok) wildlife sanctuary :-
A high altitude wildlife sanctuary in Ladakh
Karakoram wildlife sanctuary is a
primarily important as one of the few
places in India with a migratory
population of Tibetan Antelope.

This park is rich in the collection of
medicinal plants. This place is protected
area that's known for its spectacular
biodiversity. Bactrian camel (two humped camel)
can easily found which is domesticated by
locals.

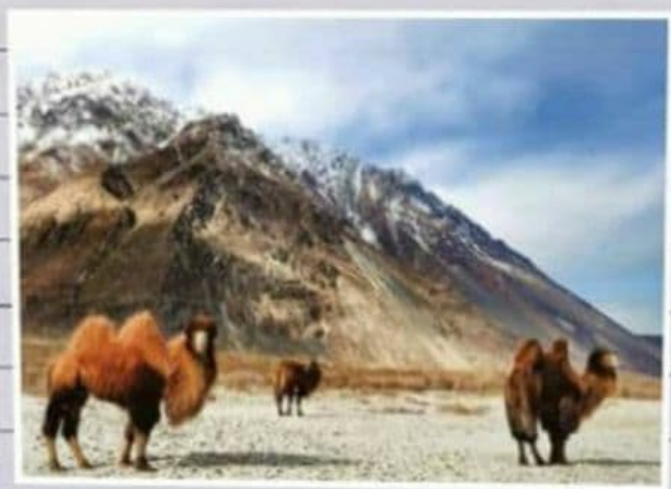


image12

The Sanctuary of Nubra Shyok where Bactrian
camel found.

5. Project Biodiversity Conservation :

Maintaining conservation of Yak and Demo with the tribal pastoralists in semi Arctic Ladakh Regions by (CENS FOOD) centre for sustainable development and food security in Ladakh.

⇒ Project Activities

- (i) Develop baselines using participatory techniques PRA in 3 villages of Fulok, Liksey and Tukla
- (ii) Community mobilization and formation of self help groups (SHG) / village committees.
- (iii) Identify the native and better breeds of YAKS for better breeding / conservation practices.
- (iv) Develop Breed Herder Association (BHA) Foster capacity building for book keeping / records both at SHG's level and the BHA level. BHA is the committee responsible for YAK maintenance.
- (v) Identify the Yakzis in each village. Agree norms for the payments / role-responsibilities and accountability of the YAKZIS. Exposure visits of neighbouring villages to the project.

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