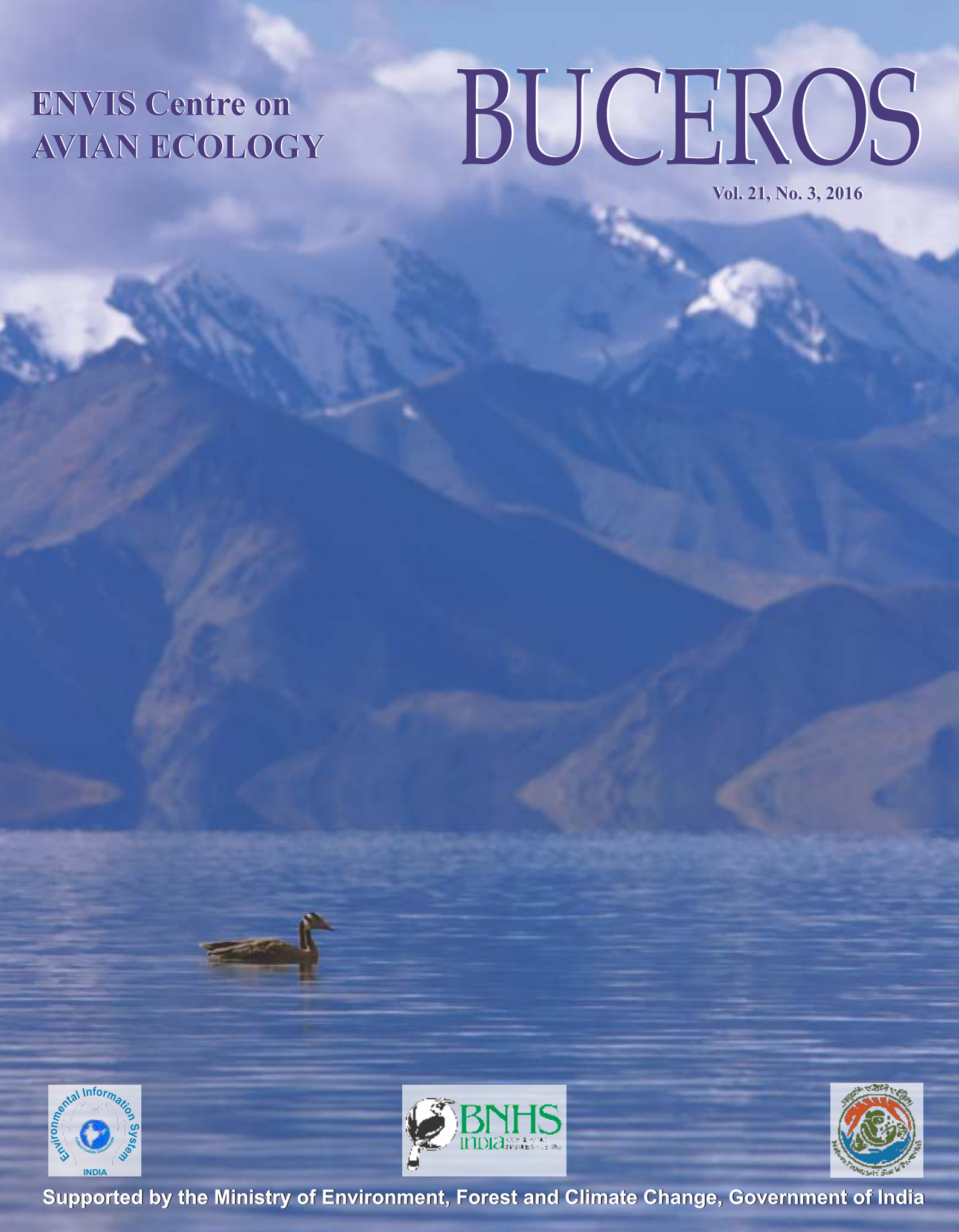


ENVIS Centre on
AVIAN ECOLOGY

BUCEROS

Vol. 21, No. 3, 2016



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ABOUT ENVIS

ENVIS (Environmental Information System) is a network of subject-specific centres located in various institutions throughout India. The focal point of the present 66 ENVIS centres in India is at the Ministry of Environment, Forest and Climate Change, New Delhi, which further serves as the Regional Service Centre (RSC) for INFOTERRA, the global information network of the United Nations Environment Programme (UNEP) to cater to environment information needs in the South Asian subregion. The primary objective of all ENVIS centres is to collect, collate, store and disseminate environment related information to various user groups, including researchers, policy planners, and decision makers.

The ENVIS Centre at the Bombay Natural History Society was set up in June 1996 to serve as a source of information on Avian Ecology.

Objectives of the ENVIS Centre at BNHS

- ✍ To create a bibliographic database of published literature related to avian ecology study
- ✍ To publish and distribute BUCEROS newsletter on avian ecology to its members
- ✍ To create and upload databases on avian ecology on ENVIS website www.bnhsenvis.nic.in
- ✍ To reply to queries related to birds



BUCEROS

ENVIS Newsletter
Avian Ecology
Vol. 21, No. 3, 2016

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Bar-headed Goose *Anser indicus*
by Asif N. Khan

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EDITORIAL

Birding has always been a refreshing activity and has become one of the most popular hobbies. The mystical land of Ladakh is known for its stunning and photographic beauty, yet it has not been a popular birding destination. Ladakh might not have the volume of birds of Rajasthan or Arunachal, but it is one such place where one can observe birds from the Palearctic and Indo-Malayan zones. In this issue, an article on Ladakh informs readers about accessible birding spots and also gives a checklist of the birds spotted there.

BNHS organizes Flamingo Festival each year, which happened to be on Earth Day this year. A brief description about the event and how ENVIS team participated in the event is provided in this issue.

Bird mapping has now become an important tool to understand how bird migration occurs. This issue includes a news article regarding bird maps for Thrissur and Alappuzha districts and ends with the Abstracts section that highlights research paper on fauna of Satara District and Vulture population in Nepal. Since Vultures are rapidly declining in the wild, this decline can be minimised with the help of local people. The abstract of paper showcases such initiative in Nepal.

Hope you enjoy reading this informative issue!

Happy reading and Birding!

Sailee Joshi-Gupte
Information Officer

ENVIS Evaluation Workshop at Ahmedabad

A two-day evaluation workshop for ENVIS Centres was held at Ahmedabad on March 17–18, 2017.

The workshop was hosted by Gujarat Ecology Commission, ENVIS Centre on Status of Environment & Related Issues, Gujarat. It was inaugurated by Mr. Ajay Jha from MoEFCC, Ms Anandi Subramanyam, ENVIS Economic Advisor, Mr Kuldeep Goyal, PCCF, Gujarat, and Mr Arvind Agarwal, F&ED, Gujarat. Dr Girish Jathar, Coordinator, BNHS-ENVIS and Ms Sailee Joshi-Gupte, Information Officer, briefed the delegates on the overall work done by the Centre highlighting the information on the Centre’s website. During this workshop, many suggestions were received to upgrade the databases of the centre like addition of the coordinates to the data.

All the participating ENVIS centres were allowed to showcase their published work at an exhibition organized by the ENVIS Secretariat, Ministry of Environment, Forest and Climate Change. BNHS-ENVIS was appreciated for its newsletter – BUCEROS and other information products by the visitors, as well as the ministry officials who visited the stall.



Neha Parkhi

ENVIS staff sharing information about BNHS-ENVIS during exhibition



Asif N. Khan

Visitors registering for BUCEROS newsletter during Flamingo festival

Flamingo Festival 2017

Ms Tejashree D. Nakashe attended the annual ‘Flamingo Festival’ conducted by the BNHS, on April 22, 2017, a day which is also celebrated as ‘Earth Day’. The event witnessed a footfall of around 10,000–12,000 people, young and old alike, who thronged to the Sewri Jetty in Mumbai, venue for the festival, to watch the pink beauties. Ms Nakashe disseminated information on birds and answered queries posed by the public during the festival. ENVIS newsletter – BUCEROS, besides other informative material, was distributed to the visitors. Centre received 53 new members through this activity.

BNHS to study migratory birds along Maharashtra coast

Tags, rings are being made, and trapping will be carried out by professionals; process to begin by September-end

The Bombay Natural History Society (BNHS) is set to map the Central Asian Flyway (CAF) with large-scale ringing of birds along the coast of Maharashtra to study the status of globally-threatened and rare species moving to Indian wintering grounds.

Deepak Apte, Director, BNHS, told *The Hindu* that they have received permissions from Gujarat, Maharashtra, Tamil Nadu, Puducherry, Andhra Pradesh, Odisha, and Himachal Pradesh, to begin the study by September-end.

“The ringing of birds will help them study the movement and splitting pattern of short and long distance migratory birds and document their staging in the wintering areas along the Indian coast. We are in the initial stages where flags and rings are being made. The process of trapping birds will be carried out by professionals,” said Dr Apte.

Curlew Sandpiper

Nearly 1,500 birds, including Curlew Sandpiper, were ringed between December 2014 and February 2015. During the flamingo festival in April, experts from BNHS have spotted the ringed Curlew Sandpipers at Sewri jetty wetlands. They said, Mumbai is the stopover for these birds.

Ms Tuhina Katti, a scientist with BNHS, said, “Ringing is important in two ways. Firstly, we come to understand the health of the habitat in which the birds have stayed and secondly, in studying the lifespan of a particular bird, and whether the species are abundant in number or have become extinct.”

Specific paths

Ms Katti said, “Another aspect of bird monitoring is to understand the specific paths used by birds during migration. Birds use pathways to complete their annual migration and these routes support millions carrying out a strenuous journey of thousands of kilometres every year. Moreover, the species become the controlling agent of the pests in the region. In case of an outbreak of bird flu or any such disease, if the pathways are known, the model for how the disease spreads can be generated and action taken.”

Source: <http://www.thehindu.com/news/cities/mumbai/bnhs-to-study-migratory-birds-along-maharashtra-coast/article18421455.ece>

Watch out: Bird maps for Thrissur and Alappuzha ready

The first district bird maps in India have been completed for Alappuzha and Thrissur. These would have the honour of being the first bird maps that were prepared for specific districts in India.

Bird maps may be used to correctly assess the number and spread of birds in a particular area. They can be used to study variations in bird populations and also their flocking dynamics. They become all the more relevant because an authoritative account on Indian birds is lacking or rare to find for environment lovers in India.

Similar maps are extensively used in foreign nations, and Kerala had made the first effort to launch them in India last year.

The Kerala Bird Atlas programme is backed by birdwatchers and the Forest department and the atlas is expected to be released in 2020. The district maps that are to be released now are the first steps in that direction. Such a map was earlier made available in Mysore city.

Work on the map was started by watching birds between January and March – which is the season of migratory birds – and July to September when migratory birds are absent in the state. About 50 members in the team watched birds for 120 days to create the map. The data was then collated using computers. Encroaching plant species were also studied in the effort and a separate report on them would be released soon. After five years, the second phase of the observation would be carried out.

The maps were released on June 12, 2016, at Thrissur.

Source: <http://english.manoramaonline.com/news/kerala/first-district-bird-maps-india-thrissur-alappuzha-ready.html>

Ladakh: The land beyond...

Text and Photographs: Asif N. Khan



Nestled between two of the world's mightiest mountain ranges the Great Himalaya and Karakoram is the isolated district of Ladakh. The eastern region of this district comprises the western extension of the Tibetan Plateau and is dominated by an arid, desert-like landscape with barren hills. The western region is situated at lower altitude and is comparatively much greener.

Geography

Ladakh is a high-altitude plateau ranging between 2,000 m and 7,000 m. The region is bound by four parallel ranges – Greater Himalaya, Zaskar, Ladakh, and Karakorum – which run from north-west to south-east. The Indus River is the backbone of the region. The few other important rivers of the region are: Shyok, Nubra, Zaskar, and Suru. The landscape with its valleys and the network of rivers and tributaries act as safe havens for animals and humans alike. Ladakh is also famous for its high altitude lakes that host the breeding Bar-headed Goose *Anser indicus*, Brown-headed Gull *Larus brunnicephalus*, and Black-necked Crane *Grus nigricollis*. The major lakes of this region are: Tso Moriri, Tso Kar, Tso Pangong, and Kyagar Tso.

Avifauna

This region has Palearctic and the Indo-Malayan zoogeographic zones which is why one encounters species from both the zones. However, avifauna of this region is more Palearctic than Indo-Malayan. In addition,

species from the Tibetan plateau extend their range into Eastern Ladakh. Strategically located, this region is a crucial stopover in the Central Asian Flyway during the autumn and spring migration. The dry and warm summer months attract many summer migrants to this region.

The region transitions from alpine meadows and marshes to high passes in a short time, which makes it ideal for birders. Given below are a few notable birding places in the region:

They Marshes

They Marshes are situated 7 km from Leh, near the They palace, a tourist destination. The Carrion Crow *Corvus corone*, Eurasian Hobby *Falco subbuteo*, Mountain Chiffchaff *Phylloscopus sindianus*, Citrine Wagtail *Motacilla citreola*, Black-billed Magpie *Pica pica*, and Reed Bunting *Emberiza schoeniclus* are some of the species that can be observed here.

Choglamsar Bridge:

Until 2014, the area around Choglamsar Bridge was used by the locals to wash the hides of animals. It was therefore, an ideal place to spot the uncommon Eurasian Jackdaw *Corvus monedula*. I observed 15 individuals in 2011. However, in 2013 washing of hides has been disallowed and sighting of the Eurasian Jackdaw has drastically reduced.

Sindhu Ghat:

Situated close to the They Village, the banks of the Indus (*Sindhu*) were known for the sighting of Ibisbill *Ibidorhyncha struthersii*. However, before the elaborate construction work between 2014 and 2015, the Ibisbill was frequently spotted at Sindhu Ghat. A single individual was spotted in 2012 and in 2014.

Army Pond:

Popularly known as the Army Pond by the locals, this small waterbody is situated on the Leh-Srinagar Highway about 4 km from the Leh Airport. Birds like Eurasian Coot *Fulica atra*, Little Grebe *Tachybaptus ruficollis*, and the rare Red-necked Grebe *Podiceps grisegena* have been spotted here.

Hemis National Park

Ladakh is also home to one of India's largest and highest national parks, the Hemis National Park. The Park has an altitude range between 3,000 and 6,000 m, and is rich with birdlife. It can be accessed from several points; however, the trail alongside the Shang Nullah was explored. This trail is good for spotting the Fire-fronted Serin *Serinus pusillus* and Chukar Partridge *Alectoris chukar*. The cliffs *en route* are perfect to spot the Northern House-Martin *Delichon urbicum*, Eurasian Crag-Martin *Ptyonoprogne rupestris* and Common Kestrel *Falco tinnunculus*. The garbage along the camping grounds and villages attracts Common Raven *Corvus corax* and Common Rosefinch *Carpodacus erythrinus*.

Tso Moriri and Tso Kar

Situated in the Changthang plateau, the Tso Moriri is the second largest lake in Ladakh, and forms the Tso Moriri Wetland Conservation Reserve. The lake is fed by spring water, by melting snow from the surrounding mountains, and the Labgo Glacier. The streams that feed the lake form extensive marshes, which used to attract the Vulnerable (IUCN 2016) Black-necked Crane. The lake is also a breeding ground for the

Bar-headed Goose. In 2014, I observed upto 14 pairs. The northern nullah that empties into the lake is a good place to spot the White-winged Redstart *Phoenicurus erythrogastrus* and White-throated Dipper *Cinclus cinclus*.

There are several places between Tso Moriri and Tso Kar that one can stop at for birding, such as the Sumdo Village for Alpine Accentor *Prunella collaris* and Black-winged Snowfinch *Montifringilla adamsi*. The Black-necked Crane can be spotted at the Puga Hot spring and I have been lucky to spot two pairs here along with breeding pairs of Ruddy Shelduck *Tadorna ferruginea*. The Tibetan Ground-Tit *Pseudopodoces humilis* which is a uncommon species can be spotted just after entering the plains before Startsapuk Tso. The Upland Buzzard *Buteo hemilasius* and Little Owl *Athene noctua* can also be spotted here. The lake is situated at 4,500 m and plays host to the Black-necked Crane, which uses the salt marshes around the lake as breeding ground. I have recorded a maximum of four pairs here. The grounds around the lake are a good spot for the Tibetan Sandgrouse *Syrrhaptes tibetanus*, which can be seen in hundreds during dawn. The cliffs along the road are good spots to observe the Golden Eagle *Aquila chrysaetos*. Other birds that I have recorded here include the Pied Avocet *Recurvirostra avosetta* (27 birds seen), Black-winged Stilt *Himantopus himantopus*, Green Sandpiper *Tringa ochropus*, Wood Sandpiper *Tringa glareola*, Common Redshank *Tringa totanus*, Common Raven, Horned Lark *Eremophila alpestris*, and Hill Pigeon *Columba rupestris*.

Nubra Valley:

The Nubra valley is situated between the Ladakh and Karakoram ranges along the Shyok and Nubra rivers. The valley is famous for its forest of Hippophae shrub, popularly known as Leh Berry. It is within this shrub forest that one can spot the White-browed Tit-Warbler *Leptopoeecile sophiae*. One can also spot the Tibetan Lark *Melanocorypha maxima*, Hume's Short-toed Lark *Calandrella acutirostris*, and Hume's Whitethroat *Sylvia althaea*. The various water birds like Ruddy Shelduck, Garganey *Spatula querquedula*, Northern Pintail *Anas acuta*, and Mallard *Anas platyrhynchos* can be observed on several small water bodies scattered along the route. Besides these, Charadriiformes like Black-tailed Godwit *Limosa limosa*, Common Sandpiper *Actitis hypoleucos*, Common Greenshank *Tringa nebularia*, Common Redshank *Tringa totanus*, Green Sandpiper, and Ruff *Calidris pugnax* can be spotted here.



Hundar sand dunes, Nubra Valley

Pangong Tso and Harong Wetland:

The Pangong Lake is 134 km long, however, about 60% of this lake falls in Tibet (China). The lake shows a good number of gulls particularly Brown-headed Gull. Great Black-headed Gull *Larus ichthyaetus*, Great Crested Grebe *Podiceps cristatus*, Common Tern *Sterna hirundo*, and Ruddy Shelduck are some other species that could be spotted here. The Chang La pass above Zingral, *en route* to Pangong lake, is a good spot to look for Tibetan Snowcock *Tetraogallus tibetanus*. The Harlong Wetland lies 15 km south of Tangste town. I recorded one to two pairs of Black-necked Crane at these marshes, one pair with a single chick in 2014 and two pairs both without chicks in 2015.

Khardung La:

Claimed to be the world's highest motorable road, this high altitude pass is just 40 km north to Leh. The pass is flanked by two check posts, the South Pullu towards Leh and North Pullu. The entire 56 km route is great for birding due to the large variation in altitude. While travelling from Leh to North Pullu the altitude varies greatly from 3,000–5,300 m. Species like Yellow-billed Chough *Pyrrhocorax graculus*, Red-billed Chough *Pyrrhocorax pyrrhocorax*, Black-winged Snowfinch, Plain-backed Snowfinch *Pyrgilauda blanfordi*, Plain Mountain-Finch *Leucosticte nemoricola*, Brandt's Mountain-Finch *Leucosticte brandti*, Red-fronted Rosefinch *Carpodacus puniceus*, Common Raven, Bearded Vulture *Gypaetus barbatus*, and Golden Eagle can be spotted along the route.

Suru Valley:

The Suru valley lies in the western part of Ladakh and is accessible by the road that goes from Kargil towards Padum. The lower altitude of this region is particularly good for sighting warblers. One can spot Mountain Chiffchaff, Sulphur-bellied Warbler *Phylloscopus griseolus*, Greenish Leaf-Warbler *Phylloscopus trochiloides*, and Tickell's Leaf-Warbler *Phylloscopus affinis* here. Other birds like Solitary Snipe *Gallinago solitaria*, Common Tern, Eurasian Wryneck *Jynx torquilla*, Brown Dipper *Cinclus pallasii*, Oriental Turtle-Dove *Streptopelia orientalis*, Black-throated Accentor *Prunella atrogularis*, Alpine Swift *Tachymarptis melba*, Ibisbill, Blue Rock-Thrush *Monticola solitarius*, Desert Wheatear *Oenanthe deserti*, Great Rosefinch *Carpodacus rubicilla*, and Indian Golden Oriole *Oriolus kundoo* can also be spotted here.



Scenic beauty of Pangong Tso

During my four visits to Ladakh between 2010 and 2015, I recorded 141 species belonging to 18 orders and 42 families, of which six are threatened.

List of Threatened Species:

Black-necked Crane *Grus nigricollis*

IUCN Status: Vulnerable

This species is classified as Vulnerable as it has a single small population that is declining owing to the loss and degradation of wetlands, and changing agricultural practices in both its breeding and wintering grounds (IUCN 2016).

The bird has been spotted at three locations: Puga Springs, Tso Kar, and Harlong Marshes; maximum number of two pairs at Puga Springs, single pair at Tso Kar, and two pairs (one pair with chick) at Harlong Marshes.

Black-tailed Godwit *Limosa limosa*

IUCN Status: Near Threatened

Although this species is widespread and has a large global population its numbers have declined rapidly in parts of its range owing to changes in agricultural practices. Overall, rate of declining globally qualifies the species as Near Threatened (IUCN 2016).

A flock of 6 birds was spotted at Puga Springs and a flock of 18 birds at a wetland along the Diskit-Hundar road in 2015.

Bearded Vulture *Gypaetus barbatus*

IUCN Status: Near Threatened

This species has been uplisted to Near Threatened owing to evidence that it has undergone a moderately rapid population decline over the past three generations (IUCN 2016).

The bird can mostly be seen circling while travelling in the passes. They were spotted at South and North Pullu, and Zingral.

Egyptian Vulture *Neophron percnopterus*

IUCN Status: Endangered

This long-lived species qualifies as Endangered owing to a recent and extremely rapid population decline in India (presumably resulting from poisoning by the veterinary drug Diclofenac) combined with severe long-term declines in Europe (>50% over the last three generations [42 years]) and West Africa, besides ongoing declines through much of the rest of its African range (IUCN 2016).

Four birds were seen on a cattle carcass 10 km from South Pullu on the Leh-Khardung La road. The birds were constantly being chased by stray dogs, which were also feeding on carcass.

Himalayan Vulture *Gyps himalayensis*

IUCN Status: Near Threatened

This species has been uplisted to Near Threatened as it is suspected that it will undergo a moderately rapid population decline over the next three generations owing to the impacts of diclofenac use in livestock, a drug that has caused drastic declines in other *Gyps* species, and appears to be fatal to this species when ingested. The distribution of this species and existing efforts to reduce diclofenac use may limit the impacts (IUCN 2016).

Four birds were seen near South Pullu, and two at Zingral.

Curlew Sandpiper *Calidris ferruginea*

IUCN Status: Near Threatened

Flocks ranging in size from 5 to 15 individuals were seen in Puga Springs and at wetlands along Diskit-Hundar road during all visits.

The species has an extremely large range and the overall population trend is very difficult to determine due to varying trends in different populations along different flyways. This species is listed as Near Threatened owing to a global population decline which is thought to approach the threshold for Vulnerable under the population size reduction.



Curlew Sandpiper *Calidris ferruginea*



Egyptian Vulture *Neophron percnopterus*

Conservation Issues:

Possibly one of the major issues faced by the region is tourism, with popularisation due to movies, and elimination of Inner Line Permit in several areas for Indians, has drastically increased the number of tourist. The number has gone up from 527 in 1974 to 1,78,042 in 2011 (LAHDC, www.leh.nic.in). The high tourist influx and small tourist season has added pressure on the already fragile ecosystem. One of the major problems faced by the area due to tourism is garbage.

Constructions and unplanned developments are another problem, new constructions for home stays by the locals at Shey Marshes or the cultural center on bank of the Indus has drastically affected the habitats.

Feral dogs and cats, the numbers of which have increased over the years; sightings of feral dogs chasing Kiang (Tibetan Wild Ass) are common. The feral dogs are also destroying eggs and fledging of breeding birds (Rahmani 2013).

The Rupshu Valley and areas around Tso Moriri Lake have been undergoing degradation due to overgrazing by livestock (Chandan 2007).

Table 1: Checklist of Birds Sighted in Ladakh

Sr. No.	Common Names	Order, Family and Scientific Names	IUCN Status	Migration Status	Records
	Order	ANSERIFORMES			
	Family	Anatidae			
1	Bar-headed Goose	<i>Anser indicus</i>	LC	S-Br	M,T
2	Ruddy Shelduck	<i>Tadorna ferruginea</i>	LC	S-Br	N,K
3	Garganey	<i>Spatula querquedula</i>	LC	S, P	L,N
4	Northern Shoveler	<i>Spatula clypeata</i>	LC	S, P	L,N
5	Gadwall	<i>Mareca strepera</i>	LC	S, P	L,N
6	Eurasian Wigeon	<i>Mareca penelope</i>	LC	S, P	L,N
7	Mallard	<i>Anas platyrhynchos</i>	LC	S, P	N
8	Northern Pintail	<i>Anas acuta</i>	LC	S, P	L,N
9	Common Teal	<i>Anas crecca</i>	LC	P	N
	Order	GALLIFORMES			
	Family	Phasianidae			
10	Himalayan Snowcock	<i>Tetraogallus himalayensis</i>	LC	R	Z
11	Chukar Partridge	<i>Alectoris chukar</i>	LC	R	H
12	Tibetan Partridge	<i>Perdix hodgsoniae</i>	LC	R	Z
	Order	PODICIPEDIFORMES			
	Family	Podicipedidae			
13	Little Grebe	<i>Tachybaptus ruficollis</i>	LC	S	L
14	Great Crested Grebe	<i>Podiceps cristatus</i>	LC	S	L, P
15	Black-necked Grebe	<i>Podiceps nigricollis</i>	LC	S	L
16	Red-necked Grebe	<i>Podiceps grisegena</i>	LC	S	L
	Order	COLUMBIFORMES			
	Family	Columbidae			
17	Rock Pigeon	<i>Columba livia</i>	LC	R	L, N, I, S
18	Hill Pigeon	<i>Columba rupestris</i>	LC	R	K, T
19	Oriental Turtle-Dove	<i>Streptopelia orientalis</i>	LC	R	L, N, S, I
	Order	PTEROCLIFORMES			
	Family	Pteroclididae			
20	Tibetan Sandgrouse	<i>Syrrhaptes tibetanus</i>	LC	R	K
	Order	CAPRIMULGIFORMES			
	Family	Apodidae			
21	Alpine Swift	<i>Tachymarptis melba</i>	LC	R	H
22	Common Swift	<i>Apus apus</i>	LC	R	H
	Order	CUCULIFORMES			
	Family	Cuculidae			
23	Asian Koel	<i>Eudynamys scolopaceus</i>	LC		S
24	Common Cuckoo	<i>Cuculus canorus</i>	LC		S
	Order	GRUIFORMES			
	Family	Rallidae			
25	Common Moorhen	<i>Gallinula chloropus</i>	LC	P	S
26	Eurasian Coot	<i>Fulica atra</i>	LC	P	S
	Family	Gruidae			
27	Black-necked Crane	<i>Grus nigricollis</i>	VU	S-Br	K, T, Su
	Order	PELECANIFORMES			
	Family	Ardeidae			
28	Indian Pond-Heron	<i>Ardeola grayii</i>	LC	P	L
29	Eastern Cattle Egret	<i>Bubulcus coromandus</i>	-	P	I
30	Grey Heron	<i>Ardea cinerea</i>	LC	P	L
31	Great Egret	<i>Ardea alba</i>	LC	P	Su
32	Little Egret	<i>Egretta garzetta</i>	LC	P	L
	Order	SULIFORMES			
	Family	Phalacrocoracidae			
33	Great Cormorant	<i>Phalacrocorax carbo</i>	LC	P	I

Sr. No.	Common Names	Order, Family and Scientific Names	IUCN Status	Migration Status	Records
	Order	CHARADRIIFORMES			
	Family	Ibidorhynchidae			
34	Ibisbill	<i>Ibidorhyncha struthersii</i>	LC	S-Br	L, I
	Family	Recurvirostridae			
35	Pied Avocet	<i>Recurvirostra avosetta</i>	LC	P	Su
36	Black-winged Stilt	<i>Himantopus himantopus</i>	LC	P	Su
	Family	Charadriidae			
37	Pacific Golden Plover	<i>Pluvialis fulva</i>	LC	P	I
38	Little Ringed Plover	<i>Charadrius dubius</i>	LC	S	Su
39	Kentish Plover	<i>Charadrius alexandrinus</i>	LC	P	N
40	Lesser Sand Plover	<i>Charadrius mongolus</i>	LC	S-Br	N
	Family	Scolopacidae			
41	Black-tailed Godwit	<i>Limosa limosa</i>	NT	P	Su, N
42	Ruddy Turnstone	<i>Arenaria interpres</i>	LC	P	Su
43	Ruff	<i>Calidris pugnax</i>	LC	P	N
44	Curlew Sandpiper	<i>Calidris ferruginea</i>	NT	P	N
45	Temminck's Stint	<i>Calidris temminckii</i>	LC	P	N
46	Little Stint	<i>Calidris minuta</i>	LC	P	N
47	Solitary Snipe	<i>Gallinago solitaria</i>	LC	P	S
48	Common Snipe	<i>Gallinago gallinago</i>	LC	P	L
49	Common Sandpiper	<i>Actitis hypoleucos</i>	LC	S	L, N, Su, T
50	Common Greenshank	<i>Tringa nebularia</i>	LC	S	L, N, Su
51	Common Redshank	<i>Tringa totanus</i>	LC	S	L, N, Su, T
52	Wood Sandpiper	<i>Tringa glareola</i>	LC	P	Su, T
53	Green Sandpiper	<i>Tringa ochropus</i>	LC	P	Su, N
	Family	Laridae			
54	Brown-headed Gull	<i>Larus brunnicephalus</i>	LC	P	P, M
55	Common Black-headed Gull	<i>Larus ridibundus</i>	LC	P	P, M
56	Great Black-headed Gull	<i>Larus ichthyaetus</i>	LC	P	P, M, I, T
57	Lesser Black-backed Gull	<i>Larus fuscus</i>	LC	P	I
58	Common Tern	<i>Sterna hirundo</i>	LC	S-Br	P, M
	Order	ACCIPITRIFORMES			
	Family	Accipitridae			
59	Bearded Vulture	<i>Gypaetus barbatus</i>	NT	R	E, C, Z
60	Egyptian Vulture	<i>Neophron percnopterus</i>	EN	S	C
61	Himalayan Vulture	<i>Gyps himalayensis</i>	NT	R	E, C, Z
62	Golden Eagle	<i>Aquila chrysaetos</i>	LC	R	K, Z
63	Western Marsh-Harrier	<i>Circus aeruginosus</i>	LC	P	L
64	Eurasian Sparrowhawk	<i>Accipiter nisus</i>	LC	S-Br	I
65	Northern Goshawk	<i>Accipiter gentilis</i>	LC	P	I
66	Black Kite	<i>Milvus migrans</i>	LC	S-Br	L
67	Upland Buzzard	<i>Buteo hemilasius</i>	LC	S-Br	E, M
	Order	STRIGIFORMES			
	Family	Strigidae			
68	Little Owl	<i>Athene noctua</i>	LC	R	K
69	Eurasian Eagle-Owl	<i>Bubo Bubo</i>	LC	R	P (En-route from Tangstey to Pangong)
	Order	BUCEROTIFORMES			
	Family	Upupidae			
70	Common Hoopoe	<i>Upupa epops</i>	LC	S-Br	L, N, S, I
	Order	PICIFORMES			
	Family	Picidae			
71	Eurasian Wryneck	<i>Jynx torquilla</i>	LC	S-Br	S
	Order	CORACIIFORMES			
	Family	Alcedinidae			
72	Small Blue Kingfisher	<i>Alcedo atthis</i>	LC	S-Br	L, S

Sr. No.	Common Names	Order, Family and Scientific Names	IUCN Status	Migration Status	Records
	Order	FALCONIFORMES			
	Family	Falconidae			
73	Common Kestrel	<i>Falco tinnunculus</i>	LC	S-Br	L, I, N, S
74	Eurasian Hobby	<i>Falco subbuteo</i>	LC	S-Br	L
75	Peregrine Falcon	<i>Falco peregrinus</i>	LC	P	I
	Order	PASSERIFORMES			
	Family	Oriolidae			
76	Indian Golden Oriole	<i>Oriolus kundoo</i>	LC	S-Br	L, S
	Family	Dicruridae			
77	Black Drongo	<i>Dicrurus macrocercus</i>	LC	S-Br	I
	Family	Laniidae			
78	Isabelline Shrike	<i>Lanius isabellinus</i>	LC	P	S
79	Grey-backed Shrike	<i>Lanius tephronotus</i>	LC	S-Br	L
	Family	Corvidae			
80	Red-billed Chough	<i>Pyrrhocorax pyrrhocorax</i>	LC	R	L, C, Z, K, E
81	Yellow-billed Chough	<i>Pyrrhocorax graculus</i>	LC	R	C, E
82	Black-billed Magpie	<i>Pica pica</i>	LC	R	L, N, S, I, Su, T
83	Eurasian Jackdaw	<i>Corvus monedula</i>	LC	R	L (Choglamсар)
84	Common Raven	<i>Corvus corax</i>	LC	R	I, H, M,K, P, C, Su, Z
85	Carrion Crow	<i>Corvus corone</i>	LC	R	L, I
86	House Crow	<i>Corvus splendens</i>	LC	R	S
87	Large-billed Crow	<i>Corvus macrorhynchos</i>	LC	R	I, L, S
	Family	Prunellidae			
88	Alpine Accentor	<i>Prunella collaris</i>	LC	R	Su, K
89	Robin Accentor	<i>Prunella rubeculoides</i>	LC	R	L, Su, K, N
90	Brown Accentor	<i>Prunella fulvescens</i>	LC	R	I, Su
91	Black-throated Accentor	<i>Prunella atrogularis</i>	LC	R	I
	Family	Passeridae			
92	House Sparrow	<i>Passer domesticus</i>	LC	R	L, N,S I
93	Spanish Sparrow	<i>Passer hispaniolensis</i>	LC	P	S
94	Black-winged Snowfinch	<i>Montifringilla adamsi</i>	LC	R	Su, K, C, Z
95	White-rumped Snowfinch	<i>Onychostruthus taczanowskii</i>	LC	R	K
96	Plain-backed Snowfinch	<i>Pyrgilauda blanfordi</i>	LC	S-Br	C
	Family	Motacillidae			
97	Tree Pipit	<i>Anthus trivialis</i>	LC	P	I, S
98	Western Yellow Wagtail	<i>Motacilla flava</i>	LC	S-Br	L,I
99	Grey Wagtail	<i>Motacilla cinerea</i>	LC	S-Br	L,I
100	Citrine Wagtail	<i>Motacilla citreola</i>	LC	S-Br	L,I
101	White Wagtail	<i>Motacilla alba</i>	LC	S-Br	L,I
	Family	Fringillidae			
102	Common Rosefinch	<i>Carpodacus erythrinus</i>	LC	S-Br	I, H, N, S
103	Great Rosefinch	<i>Carpodacus rubicilla</i>	LC	R	H, S
104	Red-fronted Rosefinch	<i>Carpodacus puniceus</i>	LC	R	S
105	Plain Mountain-Finch	<i>Leucosticte nemoricola</i>	LC	R	E, C, Z
106	Brandt's Mountain-Finch	<i>Leucosticte brandti</i>	LC	R	E, C, Z
107	Twite	<i>Linaria flavirostris</i>	LC	R	K
108	Eastern Goldfinch	<i>Carduelis caniceps</i>	LC	R	S
109	Fire-fronted Serin	<i>Serinus pusillus</i>	LC	R	H, S
	Family	Emberizidae			
110	Rock Bunting	<i>Emberiza cia</i>	LC	S-Br	H
111	Reed Bunting	<i>Emberiza schoeniclus</i>	LC	P	L (Shey Marshes)
	Family	Paridae			
112	Tibetan Ground-Tit	<i>Pseudopodoces humilis</i>	LC	R	K
113	Cinereous Tit	<i>Parus cinereus</i>	-	R	L,N,S
	Family	Alaudidae			
114	Tibetan Lark	<i>Melanocorypha maxima</i>	LC	S-Br	K

Sr. No.	Common Names	Order, Family and Scientific Names	IUCN Status	Migration Status	Records
115	Hume's Short-toed Lark	<i>Calandrella acutirostris</i>	LC	S-Br	N
116	Horned Lark	<i>Eremophila alpestris</i>	LC	R	P, K, T
117	Oriental Skylark	<i>Alauda gulgula</i>	LC	S-Br	S
	Family	Acrocephalidae			
118	Blyth's Reed-Warbler	<i>Acrocephalus dumetorum</i>	LC	S-Br	S
	Family	Hirundinidae			
119	Common Sand-Martin	<i>Riparia riparia</i>	LC	S-Br	I
120	Northern House-Martin	<i>Delichon urbicum</i>	LC	S-Br	H
121	Barn Swallow	<i>Hirundo rustica</i>	LC	S-Br	L, I
122	Eurasian Crag-Martin	<i>Ptyonoprogne rupestris</i>	LC	S-Br	H, Su
	Family	Phylloscopidae			
123	Siberian Chiffchaff	<i>Phylloscopus tristis</i>	LC	S-Br	I, S
124	Mountain Chiffchaff	<i>Phylloscopus sindianus</i>	LC	S-Br	L, I, S
125	Sulphur-bellied Warbler	<i>Phylloscopus griseolus</i>	LC	S-Br	S
126	Tickell's Leaf-Warbler	<i>Phylloscopus affinis</i>	LC	S-Br	S
127	Greenish Leaf-Warbler	<i>Phylloscopus trochiloides</i>	LC	S-Br	S
	Family	Aegithalidae			
128	White-browed Tit-Warbler	<i>Leptopoecile sophiae</i>	LC	S-Br	N
	Family	Sylviidae			
129	Hume's Whitethroat	<i>Sylvia althaea</i>	-	S-Br	N
	Family	Sittidae			
130	Wallcreeper	<i>Tichodroma muraria</i>	LC	S-Br	T
	Family	Troglodytidae			
131	Eurasian Wren	<i>Troglodytes troglodytes</i>	LC	R	H
	Family	Cinclidae			
132	White-throated Dipper	<i>Cinclus cinclus</i>	LC	R	M
133	Brown Dipper	<i>Cinclus pallasi</i>	LC	R	S, N, Su
	Family	Turdidae			
134	Bluethroat	<i>Cyanecula svecica</i>	LC	S-Br	N, L, I
135	Little Forktail	<i>Enicurus scouleri</i>	LC	S-Br	S
136	Blue Whistling-Thrush	<i>Myophonus caeruleus</i>	LC	S	S
137	White-capped Water-Redstart	<i>Phoenicurus leucocephalus</i>	LC	S	S
138	Black Redstart	<i>Phoenicurus ochruros</i>	LC	S	S
139	White-winged Redstart	<i>Phoenicurus erythrogastrus</i>	LC	S	M
140	Desert Wheatear	<i>Oenanthe deserti</i>	LC	S	S
141	Grandala	<i>Grandala coelicolor</i>	LC	Unknown	I

Abbreviations: IUCN status: VU – Vulnerable, NT – Near Threatened, EN – Endangered, LC – Least Concern

Migration Status: S – Summer, S-Br – Summer Breeding, P – Passage, R – Resident

Recorded in: C – Chang La, E – High passes (above 4,500 msl), H – Hemis National Park, Hw – Harlong wetland, I – Indus valley, K – Tso Kar, L – Around Leh, M – Tso Moriri, N – Nubra Valley, P – Pangong Tso, Pu – North and South Pullu, S – Suru Valley, Su – Sumdo, T – Tanglang La, Z – Zingral

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Faunal diversity of Satara District, Maharashtra, India

Amit Sayyed

Satara District of Maharashtra State is a part of northern Western Ghats and Deccan Plateau biogeographic zones. The data on various faunal groups was collected from the extensive study carried out during the period between 2007 and 2010, covering different parts of the district. The present study reports faunal diversity of the district with 677 species under 150 families belonging to 11 different groups. Overall, the district has substantial faunal diversity. Out of the total species, 94 are recorded as endemic species, 35 species are listed as threatened under the IUCN Red List of Threatened Species, and 38 species are listed in the different schedules of Indian Wildlife (Protection) Act 1972 (as amended up to 2013). The information on geographical distribution pattern of mammalian species in the district is also provided.

Keywords: Faunal diversity, Satara, Maharashtra

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Vultures and people: Local perceptions of a low-density vulture population in the eastern mid-hills of Nepal

Phuyal, S., H. R. Ghimire, K. B. Shah & H. S. Baral

The cause for rapid decline of the South Asian vulture population in 1990s was unknown for many years until diclofenac was proved to be the main reason for such decline in 2004. The vulture populations from Nepal has also undergone rapid decline that causes low awareness among people about its ecological importance. For declining species that have large range and are mostly associated with humans, people's attitudes can have direct effects on their survival because of the multiple linkages and potential for both positive and negative impacts of human behaviour for these large scavengers. However, little is known about vultures in the eastern mid-hills of Nepal. Therefore, we conducted a study in Ramechhap, a district in the eastern mid-hills of Nepal, to assess the vultures' status and human relations using transect and questionnaire surveys respectively. Himalayan Griffons *Gyps himalayensis* and Egyptian Vultures *Neophron percnopterus* were found in the area, and the majority of respondents interviewed had a positive attitude towards vultures (58.8%) and their conservation (47.3%). Although neglected in previous studies, a neutral attitude (20% towards vultures and 15.8% towards vulture conservation) can be significant (largely related to ignorance) and can be readily turned to negative due to the vulture's carcass consuming behaviour and lack of conventional appeal to many people, with implications for the success of a conservation programme. In our study, carcass scarcity appeared to be an increasing concern with about 90% of the respondents reporting burying cattle carcasses, and that this practice has recently increased. In the course of the study period, however, two (unburied) carcasses were observed. Our study found that nimesulide, a potentially toxic NSAID for vultures, was used for veterinary purpose in the study area, which could be a serious threat to vultures. Other human activities such as carcass poisoning pose threats to vultures in the study area. Therefore, for long term vulture conservation, local attitudes and behaviour should be considered along with ecological aspects of vultures.

Keywords: Attitude survey, awareness, carcass scarcity, conservation attitude, eastern Himalaya, neutral attitude, nimesulide, Ramechhap, social aspects of conservation, vulture conservation

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