

## Perception about perception studies and biodiversity in Chamba, Himachal Pradesh

Chamba, in Himachal Pradesh is a district that lies in the heart of Himalayas. The 6522 sq. kms. hold the very urban environment and also harbours the remote villages. The district has an elevation from 2000 to 2100 feet with totally a mountainous landscape. Chamba has a special place in my heart as it is extensively beautiful. I started as an intern with Zoo Outreach Organisation in Chamba district from the month of July, still now the journey is very interesting. We are a team of 4 members – Arunima Sengupta, Namita Nalamala, P. Kritika, Aishwariya S. Kumar, guided by our supervisor Vishal, working to try on bridging the gaps in conservation in this different landscape. Our field station is not in main town of Chamba, but a bit away from all the hustle- bustles of the town, in Gajnoi. It is a small picturesque village on the Chamba- Dalhousie Road, surrounded all by the mountains and clouds, a number of other villages and a box full pacifying silence.

Our team is mainly working on

- Perception studies on people of Rathiar Panchayat (a panchayat of Chamba district) about the forest dependency and the farming;
- Maintaining a nursery of indigenous plants looking forward to minimize the human – black bear conflicts;
- Reforestation of native plant species in the area (from the nursery);
- Observing Bird and Butterfly diversity of the area (Rathiar Panchayat and Khajjiar Kalatop Wildlife Sanctuary);



A snapshot of house in Rakhela village (Rathair Panchayat). © Arunima Sengupta.



Picture showing landscape of village in the Panchayat. © Arunima Sengupta.



A maize farm. © Arunima Sengupta.



A cowshed in a house (surveyed). © Arunima Sengupta.



An ongoing survey in a village. © P Kritika.



Woman carrying wood from the forests and nearby areas. © Arunima Sengupta.



Kaniska Canace Butterfly. © Arunima Sengupta.

- Study of invasive plants in Khajjiar Kalatop Wildlife Sanctuary;
- Studying the behaviour of Himalayan Langur or Chamba Sacred Langur (*Semnopithecus ajax*);
- Monthly carrying out outreach programs with the community here and the self-help groups.

I am personally very interested in bird and butterfly diversity and the perception studies. We all together carry out the tasks mentioned above, which saves time, increases the efficiency and also enlightens us with the different perspectives we all hold in any matter and it also makes us easier to learn to take decisions in any field.

#### Perception Study:

The perception study is mainly being conducted in the Rathiar Panchayat of the Chamba district. We are looking on how people are dependent on the forests from their kitchen to their livelihoods; how is factor like wildlife (mainly the black bear – human conflict) is affecting their farming and forest dependency.

From all these data we are trying to figure out what can be the mitigating measures for the problems they are facing and also how to protect the naive wildlife and also the community here. The lives of the people here flow on very thin yet smooth flow of demands. They are mostly in farming, though some people have other occupations. They mainly plant maize as their major crop. Some people plants vegetables like potatoes, beans, chilli, radish, etc. Maize is called as the golden grain of Himachal Pradesh. It grows well in al most all soils from sandy to loamy and needs a proper drainage. The terrace farming and the

Some of the birds and butterflies observed here are listed below:

Birds	Butterflies	Moths
Slaty-headed Parakeet	Chocolate Pansy	Atlas Moth
Gray Treepie	Indian Cabbage White	Luna Moth
Yellow-billed Blue-Magpie	Common Peacock	Tiger Moth
Rock Pigeon	Lemon Pansy	Buff Ermine Moth
Common Myna	Spangle Butterfly	Cyana
Oriental Turtle-Dove	Common Windmill	Erebidae
Spotted Dove	Kaniska Canace	Arctiinae
Egyptian Vulture	Sorrel Sapphire	Geometridae
Himalayan Griffon	Snowflats	<i>Macrobrochis</i> sp.
Black Kite	Common Mapwing	<i>Lymantria</i> sp.
Great Barbet	Spotted Rustic	<i>Toccolosida</i> sp.
Himalayan Woodpecker	Common Nawab	
Eurasian Jay	Indian Tortoiseshell	
Blue Whistling-Thrush	Tree browns	
Gray-winged Blackbird	Other Swallowtails	
Large-billed Crow	Other whites and yellows	
Spotted Forktail	Other Blues and Coppers	
Himalayan Bulbul	Wall browns	
Black Bulbul	Coppers and blues	
Barn Swallow		
Streaked Laughingthrush		
Rusty-cheeked Scimitar Babbler		
Yellow-breasted Greenfinch		

N.B – Many of the birds, butterflies and moth are mentioned in their family or genus names, as they are yet to be identified and confirmed.



Chamba Sacred Langur. © Arunima Sengupta.



Indian Tortoiseshell Butterfly. © Arunima Sengupta.



Common Mapwing Butterfly. © Arunima Sengupta.



**Barn Swallow. © Arunima Sengupta.**

slanting hills facilitated the crop's growth. But on the other hand, the maize is one of the most preferred foods for the Black Bear, Langurs and Rhesus Macaques and also many birds. So, these people despite of having low income and putting much efforts, suffer a heavy loss due to these raids. But also, we are seeing and facing the consequences of the forest cover loss globally, the scenario is not much different here too. The wild animal's habitats and foods are lost and they are forced to raid the lands, which has increased much in the recent years.

A question might peep into our mind that if they suffer such loss why do they grow maize only? There are several answers to this- I am trying to put some of them we got from the perception survey:

- They have tried growing something else, but most crops are not very easily grown in this landscape;
- The uncertain rainfall has forced some people to grow maize over paddy and also the drainage of the farms is good, so both less rainfall and more rainfall conditions would not affect the maize production as it would affect the other crops. Maize needs 1200 lts of water for sowing while rice needs 3400 lts;
- The drastic changes in temperatures have

- also affected the wheat production in Himachal, forcing them to grow maize again;
- The improved yield varieties of maize +are also excellent adaptors and climate-resilient;
- The Mehla Block has been declared as a backward block by the government, under which falls the Rathiar Panchayat. In some of the villages like Sau, many people shifted from agriculture and farming to other occupations of daily wages, because the village is on the road side and has an easy access of communication. Many villages have little people as they are suffering from the emigration issues. The world is loud and vocal over one issue in the recent decades, which is not an exception – the gender inequality. The Indian Himalayan Region has been facing this issue for long. The females of the family raise their kids, go to the forest for woods and fodder and also are a main part of the farming. I would always like to address this issue to bring a balance in a holistic approach.

Also, the women here are married off within an average of 21- 25 years and do not pursue higher studies. There is no blame game to be played here. There are a lot of factors that can be the reason for this kind of situation like – the



**A discussion with team in the Nursery. © Trisha Bhattacharjee.**

economic status, accessibility to communication and facilities, less knowledge about education and its processes, employment and many. I feel this is a grave problem, because education is the weapon that can change the perspective of a person in a positive way. This landscape is very different, from having steep slopes to landslides, uncertain rainfall, fluctuating temperatures, gender inequality, problems of emigration, etc. In order to mitigate any of these issues or human-wildlife conflict, reforestation or any other conservation related problems there is no other way but to involve the communities. It would be difficult to mitigate these until and unless people are educated about these. The outreach programs should be organised more frequently to make people accustomed with the problems, concepts and mitigation ideas.

The district has lush green forest to gushing Ravi rivers. The climate of the district varies from semi-tropical to semi-arctic, so many migratory birds too visit the area. Gajnoi in the district has villages as well as forests and also holds

the main Chamba – Dalhousie Road. A variety of birds are seen here from the raptors to the warblers. The secluded places are flooded with their calls and they add a pomp to the places. The bright butterflies take my soul on their wings. We have noticed a large number moths in the nights flying seamlessly loving the darkness.

Apart from all the avian or arthropod fauna observed, there a lot of other taxa can be observed here like mammals (the Chamba Sacred Langurs, Rhesus Macaque, Barking Deer (in Khajjiar-Kalatop Wildlife Sanctuary)), amphibians, reptiles, etc.

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