Project Update: June 2019

School Awareness Programme

From 26th to 30th April 2019, a second phase school awareness programme was conducted in the five schools of Gorkha Bazar, Gorkha. In the school awareness programmes, pictorial slides containing basic information about the Musk Deer, their ecological importance, conservation status and issues were presented to the school children. This time a short video documentary about Musk Deer was also showed. The video contained visual information about the Musk Deer, its habitats, information on breeding, ecological roles, and threats it is facing. The video clips were dubbed in Nepali language so that the children in the study area could understand the information effectively. The video clips on Musk Deer were compiled using personal photographs and video clip on Musk Deer from Animal Planet videos (with acknowledgement) for the sole purpose of education only. The posters as well as the brochures, containing information about Musk Deer and its conservation, were widely disseminated to the school teachers and the school children.

Table 1: Name of awareness program conducted school

S.N.	Name of Schools
1	Shree Shakti Secondary School
2	Mahendra Jyoti Secondary School
3	Samata School
4	Bal Mandir Secondary School
5	Gorkha English Boarding School

Four hundred and fifty school children were directly communicated through the awareness program classes and more than fifteen hundred school children were reached through the distribution of posters and brochures.

This time the school programs were targeted in the Gorkha Bazar as most of the school children of the Chumnubri Rural Municipality (Musk Deer habitat area) come to Gorkha Bazar for their primary and secondary school education. The schools at Gorkha Bazar have more facility than the rural school and thus large number of children from around the Gorkha Bazar are concentrated in these schools.





Figure 1: Conducting the school awareness program at different schools of Gorkha Bazar.

Second phase survey

The second phase (Summer) survey was done in the month of May and June in the Mugumba area of Chumnubri Rural Municipality. It is situated in the northeast of the Gorkha district. The Mugumba area is one of the potential areas for the Musk Deer. The 500m transects were walked randomly in the study area and the plot of 100 X 100 m was laid within the transect. The direct sightings and indirect signs including hoof prints and pellets were recorded. The condition of the habitat and the species of herbs/shrubs/trees were also recorded.

The five-camera traps of Covert were placed along the transect randomly for three night. The camera trap was placed at the location with most potential capture of the species and were used to capture the image of the species. The Musk Deer was identified later on the basis of the morphological characters.



Figure 2: Installing the camera trap



Figure 3: Installed camera trap



Figure 4: Pellets of Musk Deer. Figure 5: Hoof print of Musk Deer.

Image capture in camera trap

In the camera trap different animals were captured. The captured animals were Musk Deer, Blue Sheep and Chauri (Himalayan cow). The camera trap also captured the bird Danphe.



Figure 6: Musk Deer in the camera trap. Figure 7: Blue sheep in the camera trap.



Figure 8: Chauri (Himalayan cow) in the camera trap. Figure 9: Danphe in the camera trap.

Questionnaire survey

The questionnaire survey was also done in the second phase in Mugumba region and its adjacent areas to know about the perception of local community regarding the

Musk Deer. The questionnaire was done with the teachers, secondary level students, farmers, porters, housewives and the Lamas (Buddhist priest).



Figure 10: Questioning with the local people about the Musk Deer.

Awareness program

A4 size brochure of Musk Deer was designed and printed. The brochure contains the general information about Musk Deer, its habitat, conservation status, possible threats, national legal acts and also the pictures of the Musk Deer and its habitat. The brochure as well as the posters were disseminated to the school children and the local people. The brochure was also posted on the walls in the local hotels, tea shops and schools as these locations are frequently visited by the foreign and national tourists including the locals visiting the area. The visitors can read the information on it and know more about the Musk Deer in the area.

Two sets of colourful metal hoarding boards of 5 feet width and 3 feet height of frame and the pole of height 6 feet were installed at two different locations in the Manaslu Conservation Area (MCA). It was installed in the Philim and the Prok area of MCA. The hoarding boards contained the colourful high quality picture of Musk Deer, the main information on the importance of the species and the legal provisions of punishments for killing or hurting it. It was installed at the location from where the visitors and the local can easily notice it and read the information on it from even a distant location.





Figure 11: Sticking posters and brochure in the hotels and school.



Figure 12: Installing the hoarding board of Musk Deer.



Figure 13: Installed hoarding board in Philim. Figure 14: Installed hoarding board in Prok.

कस्तुरी मृग सुन्दर तर दुर्लभ जीव हो । यसको संरक्षणको लागि कदम चालौं ।

- से एसियाका १३ वटा देशमा पाइने कस्तुरी मृग शाकाहारी जनाव हन् ।
- ले नेपालमा सेतोकण्ठे, सुनकण्ठे र कालो गरी तीन प्रजातीका कस्तुरी मग पाइन्छन् ।
- ले कस्तुरी मृगलाई आ.यु.सि.यन.को रातो सूचीमा संकटापन्न वन्यजन्तुको अवस्थामा राखिएको छ र यिनीहरुको संख्या घट्दो कममा छ ।
- ले कुनै पनि व्यक्तिले कस्तुरी मृगको अवैध शिकार गरेमा वा घाइते बनाएमा, कस्तुरीको वीना खरिद वा बिकी गरेमा वा ओसार पसार गरेमा पचास हजारदेखि एक लाख रुपैया जरिवाना वा पाँचदेखि पन्ध वर्षसम्म जेल सजाय वा दुवै सजाय हुनसक्छ।
- पन्ध वर्षसम्म जेल सजाय वा दुवै सजाय हुनसक्छ । लै कसूर ठहरिने कुनै अपराध गर्ने व्यक्तिलाई जानी जानी मद्दत दिएमा त्यस्ता मद्दत गर्ने मतियारलाई कसूरदारलाई हुने सजाय सरह नै सजाय हुन्छ ।

NTNC



₩₽_₽

कस्तुरी मृग सुन्दर तर दुर्लभ जीव हो । यसको संरक्षणको लागि कदम चालौं ।

Ruffor



Figure 15: Design of the hoarding board material.

Interaction with the local government body

On the occasion of World Environment Day on 5th June 2019, the MCA and the Division Forest Office organized a program in the Buddha Secondary School of Philim - Gorkha, where the local government body (Presidents of Wards and the Chairman of the Rural Municipality), Division Forest officer, Assistant Forest Officers, DSP of Gorkha, Project Chief of MCAP, Conservation Officer of MCA, Security body, Ama Samuha (Mother's Groups) of different places within the Chumnubri Rural Municipality, Youth clubs, and Local NGOs were invited. The event provided us a great opportunity to share about our research on the Musk Deer, update the project activities till date, and receive support and encouragement for the project from local conservation stakeholders and wider community. We interacted with the participants and also collected their knowledge and ideas regarding the threats to the Musk Deer and measures of conserving them in the area. We distributed posters and brochures to all the participants.



Figure 16: World Environment Day program in the Buddha Secondary School, Philim, Gorkha.



Figure 17: Distributing brochure of Musk Deer to the guests of the program.

Live sighting of the Musk Deer

In the morning of 2nd June 2019 at 6:00 am and 6:30 am, we sighted a female and a male Musk Deer respectively and on 3rd June, at 7:35 am we sighted the female Musk Deer. All these sightings were at Mugumba region. The sighted Musk Deer was just 50 to 70 m distance away from us.



Figure 18: Spotted female Musk Deer. Figure 19: Spotted male Musk Deer.

Threats to the Musk Deer

In order to document the threats faced by the Musk Deer, we surveyed its habitat. Besides that, the threats to the Musk Deer were also investigated through the interaction with the local people of Chumnubri Municipality. According to them the feral dogs were one of the threats to the Musk Deer. As the feral dogs don't get enough food, the feral dogs chase and even kill the Musk Deer and other wild animals for the prey.

The Mugumba region holds potential habitat for the Musk Deer however the construction of road from Mugumba to Bhajau is creating landslides in the area, which can become one of the threats to the habitat of the Musk Deer. Road construction may be necessary but it should be done in the managed and eco-friendly way.

Parasite analysis of the pellets

The pellets of Musk Deer were collected in the 30 ml sterile vile and preserved in the 95% ethanol in the ratio of 3:1. The parasite analysis is under the process.

The microscopic analysis of the fecal sample of the first phase has been completed. Nematode and the protozoan parasite were identified through the lab analysis. The identification up to genus level is under process.



Figure 20: Nematode parasite in the fecal matter. Figure 21: Protozoan parasite (*Eimeria* sp.).

Sighting records of other animals

During our field survey duration, we spotted different other wild animals in the Manaslu Conservation Area. These sightings were in different locations during the survey. We spotted Blue Sheep (*Pseudois nayaur*), Himalayan Tahr (*Hemitragus jemlahicus*), Royle's Pika (*Ochotona roylei*), Himalayan Marmot (*Marmota himalayana*), Asamese Monkey (*Macaca assamensis*) and different birds of the Himalayan region.



Figure 22: Blue sheep (Pseudois nayaur.)



Figure 23: Himalayan Tahr (Hemitragus jemlahicus).



Figure 24: Royle's Pika (Ochotona roylei.)



Figure 25: Himalayan Marmot (Marmota himalayana).



Figure 26: Asamese Monkey (Macaca assamensis).



Figure 27: Female Musk Deer in its habitat.