

## **Project Update: January 2019**

The Manaslu Conservation Area (MCA) lies in northern part of Gorkha district covering an area of 1663 km<sup>2</sup>. The MCA was established in 1998. It is under the management of National Trust for Nature Conservation (NTNC). The altitudinal variation has provided various micro-climatic habitats that offer shelter to unique biodiversity in the area. The first phase survey of this project "Transforming local communities to citizen scientists for local long-term conservation of Musk Deer in Manaslu Conservation Area, Nepal" was done in December 2018. Four team members went for the first field survey in MCA.

### **Consultation with the MCA office and the locals**

The survey was done in collaboration with the NTNC. The potential habitat of the musk deer was identified through consultation with the MCA office and also with the local people who had knowledge about the musk deer and its habitat in the area. Kaltal area in Prok village of Chumnumbri Rural Municipality was suggested as the best area for the musk deer habitat.

### **Questionnaire survey**

Fifty people living in MCA were interviewed about their knowledge regarding musk deer and its habitat. Government officers, teachers, farmers, social workers and conservation area staff were interviewed.



Figure 1: Questionnaire survey with the local people about the Musk Deer

### **Development of citizen scientists**

Ten local people of Prok Rural Municipality were developed as citizen scientists. They were made aware about the importance of musk deer and the ecological value of wildlife to maintain balance in the ecosystem. The team gave general information about the wildlife research equipment with special focus on study of musk deer. They were taught about the way of using GPS in the field, the method of camera trapping and use of compass. They were very excited to learn about the use of these devices which could be useful to them when visiting the forest to monitor the wildlife in the area.



Figure 2: Training to the local people about the use of GPS and camera traps



Figure 3: Local person (Mr. Karma Lama) involved in the research of Musk Deer (installing camera trap in the field)

### **Awareness programme**

Posters were prepared containing the information and the slogan about the conservation of the musk deer. The posters were disseminated to different places in the Gorkha district. While travelling from Gorkha Bazar to Manaslu Conservation Area, posters of musk deer were disseminated to different places, schools and the hotels on the way. The team also shared about the information of musk deer in MCA.





Figure 4: Musk Deer posters disseminated in the hotels on the way to MCA

We also conducted awareness programme to the *Ama Samuha* (Mothers Group) and *Yuwa Club* (Youth club) of Philim and the Prok village of Chumnumbri Rural Municipality. We delivered information about the musk deer and its importance in the ecosystem. We also distributed the posters of musk deer to the groups and clubs.

We conducted awareness programme classes in five schools located in the MCA (Table 1). We reached the school in the morning. With communication with the school administration we arranged time for an hour lecture. We conducted classes from grade 3 to 10 in each school. The lecture contained information about the ecological importance of musk deer and the existing law supporting the conservation of musk deer. We showed them the posters and also the powerpoint slides. After the classes, we selected interested 10 students for drawing and 10 students for essay competition from each school. While selecting participants for the drawing competition we gave priority to the students of lower secondary students. We gave them 2 hours for the preparation of drawing and the essay on the theme "conservation of musk deer". After completion of the competition, we ranked the drawings and essays based upon their concept, idea, creativity and the knowledge. We selected total four winners - first and second winner for the drawing competition and the other first and second winner for the essay competition. They were awarded the prizes with appreciation.

Table 1: Name of the schools in MCA where the team conducted awareness programmes

S.N.	School Name	Address
1	Shree Bhawani Secondary School	Manbu
2	Shree Janajagriti School	Machhakhola
3	Shree Shringa Himali School	Jagat
4	Buddha Secondary School	Philim
5	Shree Numbri School	Gaap

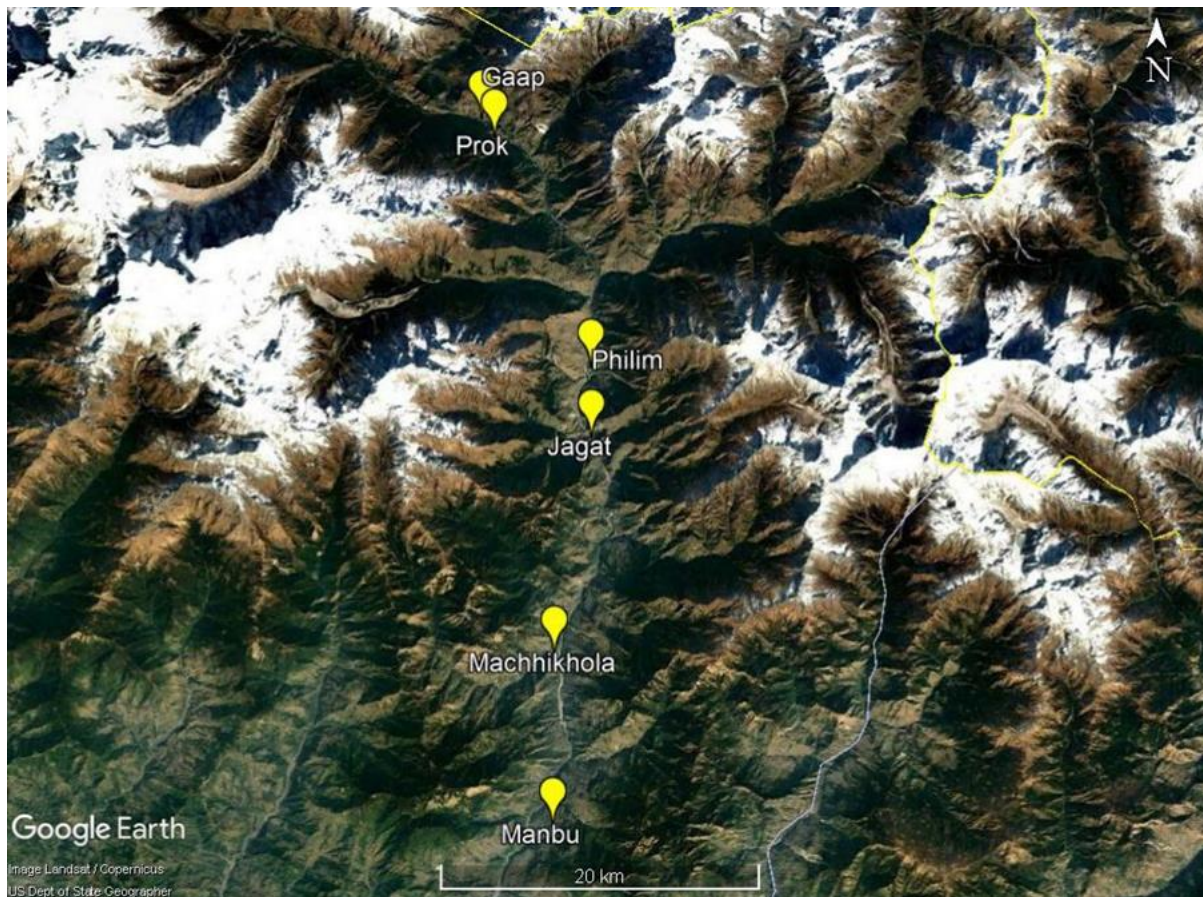


Figure 5: Map showing the locations of schools in MCA where awareness programs were conducted







Figure 6: Giving information about Musk Deer conservation to the school children



Figure 7: Students with the posters about conservation of Musk Deer



Figure 8: Participants of drawing and Essay competition at different school





Figure 9: Prize distribution to the winners of drawing and essay competition

### Baseline survey

Winter phase survey was done in the Kaltal area in Prok village of Chumnumbri Rural Municipality. We walked through the 500 m transect randomly and the plot of 100 X 100 m was laid within the transect. Along the transect we recorded the pellets as well as other indirect signs of musk deer including scratch and footprint in the snow. We also noted down the habitat condition and the tree/herbs/shrubs in the habitat. We also placed ten camera traps in the habitat of musk deer. We used five camera traps of Covert and another five camera traps of CuddleBack.



Figure 10: Footprint and pellet of Musk Deer in the study area



Figure 11: Research team in the field



Figure 12: Installed camera traps in the study area

### Parasitic analysis of pellets

Musk deer pellets were collected in the sterile vial and then 95% ethanol was placed in the ratio of 3:1 for the preservation. The parasitic analysis is under process to find out the gastrointestinal parasites of the musk deer.



Figure 13: Collected pellet samples of Musk Deer for the parasitic analysis

### Live sighting of the Musk Deer

On the 2<sup>nd</sup> and 3<sup>rd</sup> day in the Kaltal area we were lucky to sight live musk deer in the habitat. The sighting time was 8:40 am (UTC+ 05:45) and 4:00 pm on the second day and 7:35 am and 8:06 am on the third day. The Musk Deer was spotted around 200 to 300 m away from our location.





Figure 14: Live sighting of Musk Deer in the Manaslu Conservation Area

### Threats to the Musk Deer

The Kaltal area is very suitable area for the musk deer. However in the field, we found different factors which could be threats to the musk deer. The firewood collection was common in the area which seemed to be one of the threats. Local cattle also came for grazing in the habitat of musk deer.

Right after the return from our field in Gorkha, there was an incident of forest fire in the Sama village of Chumnumbri Rural Municipality. It was reported that the forest fire caused the death of musk deer in the Sama village. It could also have threatened other wild animals living in the area. According to the published news the fire started in the afternoon of 23<sup>rd</sup> December 2018.

News links: <https://bit.ly/2s11YEP>  
<http://epaper.ekantipur.com/kantipur/2018-12-25/5>

### Awareness materials

Poster containing the information and slogan to save the musk deer was designed and printed. The posters were disseminated to the local peoples and different places of Manaslu Conservation Area.

Poster of Musk Deer

Brochure containing the general information, habitat, threats, and law on

**किन संरक्षण गर्ने ?**

- नेपालमा पाईने ३ प्रजातिका कस्तुरी मृगहरू लोप हुने (संकटापन्न) अवस्थामा भएकाले ।
- राष्ट्रिय निकुञ्ज तथा वन्यजन्तु ऐन, २०२५ अनुसार कस्तुरी मृग संरक्षित जनावर हो ।
- भावीपुस्ताले कस्तुरी मृगहरू प्राकृतिक वासस्थानमा देख्न पाउने सुनिश्चितता गर्नकालागि ।
- कस्तुरी मृगहरूको अवलोकनबाट पर्या-पर्यटनमा बृद्धि भई स्थानियको विकासको सम्भावना हुने ।

**कस्तुरी मृग**  
Musk Deer

**थप जानकारीको लागि :**  
समा स्तनधारी प्राणी संरक्षण तथा अनुसन्धान फाउन्डेसन  
काठमाण्डौ, नेपाल  
वेबसाइट : [www.smart.org](http://www.smart.org)  
ईमेल : [info@smart.org](mailto:info@smart.org)

**“नमारी कस्तुरी मृग तथापि पासो जोगाऔं सबैले भावीपुस्ताको नासो ।”**

**Ruffor**

**SMF**

conservation of musk deer was prepared. The content of the brochure was prepared with thorough consultation with other researchers and NTNC. The design of the brochure has been finalised however it is in printing process. It will be disseminated in second phase to the government and non-government bodies working in the conservation of musk deer, school children and local people.



## कस्तुरी मृग संरक्षणका चुनौतीहरू

- बासस्थानको विनाश
  - मानिसहरूबाट बासस्थानको आगजनी र अतिक्रमण
  - घरपालुवा पशुहरूबाट अतिक्रमण
- कस्तुरी मृगको शिकार
- परीजवी तथा जनावरमा लाग्ने रोगहरू पनि केहि हदसम्म समस्या हुन सक्छ



पासोमा परेर मरेका कस्तुरी मृग



कस्तुरी मृगको बढ्कोला

## संरक्षणका लागि कानून

- राष्ट्रिय निकुञ्ज तथा वन्यजन्तु संरक्षण ऐन २०२९ ले कस्तुरी मृगलाई संरक्षित सुचिमा राखेको छ र यसको शिकार गर्न निषेध गरिएको छ।
- कुनै पनि व्यक्तिले कस्तुरी मृगको शिकार गरेमा वा घाइते बनाएमा, कस्तुरीको बीना खरिद वा बिक्री गरेमा वा ओसार पसार गरेमा पचास हजारदेखि एक लाख रुपैयासम्म जरिवाना वा पाँच देखि पन्ध्र वर्षसम्म जेल सजाय वा दुवै सजाय हुनसक्छ।
- कस्तुरी ठहरिने कुनै अपराध गर्ने व्यक्तिलाई जानी जानी मदत दिएमा त्यस्ता मदत गर्ने मतिथारलाई पनि कस्तुरीलाई हुने सजाय सरह नै सजाय हुन्छ।



Concept and Design: Bishnu Achhami



Photo credit: Doug Asar Photography

कस्तुरी मृग सुन्दर तर दुर्लभ जनावर हो  
यसको संरक्षणको लागि हातेमालो गरौं।

## परिचय



Photo credit: Para Blum Singh

विश्वमा सात प्रजातीका कस्तुरी मृगहरू पाइन्छन्। नेपालमा भने सेतोकण्ठे, सुनकण्ठे र कालो गरी तीन प्रजातीका कस्तुरी मृगहरू पाइन्छन्। कस्तुरी मृग यसको बीनाको लागि प्रसिद्ध छ, बीना भाले कस्तुरीको नाभिभन्दा तल्लो भागमा रहेको हुन्छ। बीना लगायत अन्य ग्रन्थबाट निस्कने बास्ना प्रयोग गरी भाले र पोथीबीच सम्बन्ध सञ्चार गर्दछन्। यिनीहरूले साथै एकै ठाउँमा बढ्कोला बुपारेर आफ्नो बासस्थानक्षेत्रको निर्धारण गर्ने गर्दछन्। यिनीहरू भेडा र च्याङ्ग्रा भन्दा साना (५० - ५३ से.मि. उचाई) हुन्छन्। यिनीहरूको तौल १७ के.जी. वा सोभन्दा कम हुन्छ। भाले पोथी दुवैको शरीर बाक्ला तथा खस्रा रौंहरूले ढाकेका हुन्छन्। जसले गर्दा यिनीहरूको शरीरलाई न्यानो बनाई राख्छ। यिनीहरूको सिङ हुँदैन, कान लामा हुन्छन् र पुच्छर अत्यन्तै छोटो हुने भएकाले प्रष्ट नदेखिन सक्छ। भालेको प्रष्ट देखिने दाँहा हुन्छ र सो उमेर अनुसार बढ्दै जान्छ। यिनीहरूको पछाडिका खुट्टा अगाडिका भन्दा लामा हुन्छन्। यिनीहरूको खुट्टाको बनोटले गर्दा भिरालो जमिन र चट्टानको पहाडमा चढ्न सक्छन्। कस्तुरी मृग लजालु हुन्छन् र सूर्यास्त र सूर्योदयको बेला सक्रिय हुन्छन्।

## बासस्थान



Photo credit: Para Blum Singh

कस्तुरी मृग नेपाल, भारत, भुटान, चीन गरी एसियाका १३ वटा देशमा पाइन्छन्। यिनीहरू नेपालको हिमाली क्षेत्र र पूर्वी तथा दक्षिणी तिब्बती पठारमा पाइन्छन्। नेपालमा समुन्द्री सतहदेखि २,५०० देखि ४,३०० मी. सम्मको उचाइमा रहेका कोणधारी र भाडिदार जंगल यिनीहरूको मुख्य बासस्थान हो।

## आहार

- कस्तुरी मृग शाकाहारी जनावर हो।
- यसले पात, चिउराको टुसा, फुल, घाँस, रुखका बोका, भयाङ, सुकेका पात आदि खान्छ।

## कस्तुरी मृगको संरक्षण किन गर्ने

- नेपालमा पाइने तीनै प्रजातीका कस्तुरी मृगलाई आ.यु.सि.यन.को रातो सूचीमा संकटापन्न वन्यजन्तुको अवस्थामा राखिएको छ र यिनीहरूको संख्या घट्दो कममा छ।
- यिनीहरू हिमाली पारिस्थितिक प्रणालीका सुचक प्रजाती हुन्।

## कसरी संरक्षण गर्ने

- कस्तुरी मृगको बासस्थानलाई मानवीय अतिक्रमणबाट जोगाउने।
- चोरी शिकार रोक्ने, साथै कसैले चोरी शिकार गरेको बाहा पाए नजिकैको राष्ट्रिय निकुञ्ज, संरक्षण क्षेत्र, वन कार्यालय, सुरक्षा निकाय, गाउँपालिका कार्यालय वा स्थानीय जनप्रतिनिधिलाई जानकारी गराउने। राष्ट्रिय निकुञ्ज तथा वन्यजन्तु संरक्षण ऐन २०२९ ले चोरी शिकार सम्बन्धि जानकारी गराउने व्यक्तिलाई पुरस्कारको व्यवस्था गरेको छ।
- कस्तुरी मृग सम्बन्धि जनचेतना फैलाउने।
- विद्यालय स्तरको पाठ्यक्रममा कस्तुरी मृग लगायत अन्य संरक्षित दुर्लभ वन्यजन्तुको आवश्यकता र संरक्षणको विषयलाई समावेश गर्ने।



Photo credit: Para Blum Singh

