

Project Update: December 2009

Activities in the “One Day Basic Training on Bat Handling Techniques”

“One Day Basic Training on Bat Handling Techniques” was jointly organized by CDZ Small Mammals Club and Central Department of Zoology (CDZ), Tribhuvan University, Kirtipur, Kathmandu, Nepal on 28 July 2009. The program was supported by Small Mammals Conservation and Research Foundation, New Baneshwor, Kathmandu. Sixteen interested participants from different faculties including Central Departments of zoology and Central Department of Environment Sciences participated. The training was divided into three sessions: The first including the lectures on basic information and importance of Bat in nature and necessity for their conservation; The second including lectures on the history of research of bats in Nepal; The third including the demonstration of methodology (Mistnetting, capture and morphometric measurement of Bats in the field).

The program was intended to induce the interested participant for bat studies and conservation.



Right: Staffs of the Zoo three from the left and Suchita Shrestha, Executive member, SMCRF right below the bat house, Schoolchildrens sitting in front.

Bat House Installed in Kathmandu Valley

Small Mammals Conservation and Research Foundation, SMCRF, Kathmandu in co-operation with Central Zoo, Jawalakhel, Lalitpur installed a bat house at the zoo on November 2, 2009.

The bat house was constructed at Kathmandu as per the design provided by Bat Conservation International, Texas, USA. The green enamel colored four chambered bat houses is of size two feet by two feet. The landing ply is six inches longer than other four half inch broad plies. The bat house was lifted by two twenty feet bamboo poles from the ground.

“This is the first attempt of installation of bat house in Nepal, the intension of placing it at the Zoo is to create awareness for bat conservation among Zoo visitors and students and we will observe it for three to six months and see whether it will be the destination for bats of the area or not” quotes Sanjan Thapa, Executive member, SMCRF and bat research student and conservationist in Nepal.

Reporting from Godawari

In support from Rufford Small Grants, UK, Small Mammals Conservation and Research Foundation, SMCRF, Kathmandu, Nepal started its project: Detailed monitoring survey of bats and their conservation through radio awareness programme and outreach programme to school children in Kathmandu Valley from Godawari- Phulchowki, one of the project sites among twenty sites during 1-3 November 2009. A team of five was led by Sanjan Thapa.

Day 1. Two hours’ drive from the Lagankhel, Lalitpur we reached Godawari in the late morning. We conducted schedule survey to the two communities namely; Tamang and Bahun-Chettri with an objective to find the local perception and knowledge about bats.

We found they were aware of them, but no effort was processed for their conservation hitherto.

In the afternoon we visited two schools and asked permission and their cooperation to conduct awareness lectures to the school children’s. Following this we searched and pointed out the area and sites for mist netting.

Before the sunset we arranged three mist nets and stretched them in bamboo poles along the small pool and stream in Janajagaran community forest. At 5:45 PM we noted the first flight appearance. Bat detector recorded 35-60 kHz frequencies. We estimated three species from the flight observation which last for 6:59 PM.

Day 2. The morning started with hiking to the nearby bat cave. The mouth of which was bounded by large rocks lying on side and below. The entrance was a difficult slit and we dropped down hanging on a large root. The 100 meters was a broad passage which ended with a large dome like area with a lot of small short routes very difficult to go through. A small colony of *Hipposideros armiger* about 6 individuals were hanging upside down at the dome shaped space.

Few small bats were escaping from the difficult small and short routes. We were successful to get few individuals scoop netted.

We took Morphometric measurements and photographs and immediately released four individuals of bats without any stress. We identified them in the spot as *Rhinolophus affinis* and *Myotis nipalensis*.

After the lunch we organized outreach programme to school children in Crescent Academy. We delivered 45 minutes lecture on awareness and conservation of bats to 100 students of standard 6, 7 and 8. The lecture was focused on introduction, habit, habitat, ecology, importance and need of conservation. We displayed flex regarding the matter, distributed brochure with the regarding matter; demonstrated application of bat detector and finally took group photo.

Before sunset we deployed mist netting at the open field near by a narrow stream in the bus stand. We noted the bats emergence at 6:00 PM. Bat detector recorded the echolocation call 45- 60 kHz. However, the night was empty hand.

Day 3. Again, we organized outreach programme in the next school; CPS Residential English Boarding School. We delivered lectures to 60 students of class 5, 6 and 7. We advertised the radio awareness programme for the conservation of bats through the poster. They were attached to the notice boards of Schools, offices, local NGOs etc. We announced the same to school children also.

In the evening once again, we deployed mist netting at the picnic spot, behind the Botanical garden. It was interesting to find bat guano of few days ago in the statue of Shiva Linga of the temples which indicate that bats used to rest there. We placed the mist nets nearby a stream and a medium water pool. There we noted emergence of bats flight at 5: 41 PM. Magenta Bat Mkllb bat detector recorded 45-60 kHz. We keenly observed continuous flight just 1-foot to10 feet, over swinging and circling and sometimes dipping into the water surface. The interesting behavior observation came to an end after the bats disappeared at 7:20 PM and the unsuccessful netting continued when mist nets were brought down at 9 PM.



Left: Schedule Survey at Tamang Community. Right: Mist net opened.



Left: *Hipposideros armiger* inside the cave. Right: Using bat detector at mist netting site.



Left: School children with banner. Right: Lecture at CPS Residential School and demonstrating bat detector application.



Left: Temples nearby water pool. Right: Bat guano on the Shiva-Linga inside the temple.



Left: Advertisement on notice board at school. Right: Project team on the way after closing mist netting.



Left: Rhinolophus affinis. Right: Myotis nipalensis.

Table 1: Bats captured/collected at the site and their characters

Species netted	Date of Roost Survey	No. of individuals netted	Sex	Age	Repro-status	Ectoparasite
<i>Rhinolophus affinis</i>		3		A (Ra1 and Ra2) Y Ra3)		P (numerous)
<i>Myotis nipalensis</i>	November 2, 2009	1	M (All)	A	NR (All)	Ab

Note: M=Male; A=Adult; Y=Young, NR=Non-Reproducing, P=Present, Ab=Absent.

Table.2: Measurements of bats captured in the study area.

Bat Species	<i>Myotis nipalensis</i>	<i>Rhinolophus affinis</i> (Ra)		
External Measurements (mm)		Ra1	Ra2	Ra3
HB	44	65	55	51
T	33	25		24
TIB	17	25	25	24
FA	36	55	55	54
3mt	34	38	45	36
4mt	31	41	41	39
5mt	31	44	43	41
1ph3mt	11	14	15	11
1ph4mt	9	10	11	8
1ph5mt	9	13	12	10
2ph3mt	17	30	32	28
2ph4mt	10	17	19	17
2ph5mt	9	15	15	16
E	13	19	15	15
HF	8	10	9	8
Thumb	7	13	15	13
Noseleaf height		13	15	12
Noseleaf breadth		9	9	8
Tragus height	6			
Wt. (gm)	7	20	15	11

Note:

TIB=Length of Tibia;

3mt=Third Metacarpal; 4mt=Fourth Metacarpal; 5mt=Fifth Metacarpal;

1ph3mt=First Phalange Third Metacarpal;

1ph4mt= First Phalange Fourth Metacarpal;

1ph5mt= First Phalange Fifth Metacarpal;

2ph3mt=Second Phalange

2ph4mt= Second Phalange Fourth Metacarpal;

2ph5mt= Second Phalange Fifth Metacarpal;

E=Ear (Pinna from base to tip); Wt. =Weight.