

Report on Training in Small Mammal Field Techniques in Sri Lanka

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The Chiroptera Conservation Information Network of South Asia (CCINSA) and Rodent, Insectivore, Lagomorph and Scandent Conservation and Information Network of South Asia (RILSCINSA) organised a training workshop in "Field techniques for the study of Volant and Non-volant small mammals" at Randenigala, Sri Lanka from 29th October to 3rd November 2005.

The programme was held at Training, Research, Education and Extension (TREE) Centre, located at Victoria-Randenigala-Rantambe wildlife sanctuary, which incidentally is the largest protected area in Sri Lanka. The workshop was jointly organised by the Department of Zoology, University of Colombo, Sri Lanka and Zoo Outreach Organisation/CBSG, South Asia and WILD. The programme was sponsored by Chester Zoo, U.K., Bat Conservation International, U.S.A., Knowsley Safari Park, U.K. Dr. Paul Racey, Regius Professor, University of Aberdeen, U.K. and Dr. Mike Jordan, Curator of Higher Vertebrates, Chester Zoo were the main resource persons of the workshop.

On 29th October evening the workshop started with an informal inaugural and an introduction. Dr. Wipula Yapa, Senior Lecturer of University of Colombo, welcomed the participants and the resource persons, Dr. B.A. Daniel, introduced the resource persons and then had the "ice-breaker" with an activity called "sound off".

DAY 1: The technical session began with the lecture by Mike Jordan, who introduced the Biodiversity of the non-volant small mammals of the orders rodentia, insectivora, lagomorpha and scandentia. He stressed upon the disparity and the neglect that is being received by the small mammals, in spite of the fact that they account for about 55% of the mammals of the world.

In continuation of it Mike explained different types of traps used for the study of the rodents. He explained about the live and single capture traps such as Sherman traps of varying dimensions, Big Wire mesh traps (also known as FAWS TRAP- Forest And Wildlife Service Trap) etc. He also explained about the multi-capture traps such as UGLAN trap.

Later he explained about the handling and welfare issues while studying the small mammals. Mike told that the advantages of handling the small mammals include species identification, sexing, marking, weighing, determination of the age, breeding condition etc. Different types of marking the small mammals were told.

Field session: He then also demonstrated the preparation of the baits for setting the traps. Afterwards all the participants were taken to a nearby scrub jungle patch for the demonstration of setting up the traps. 30 traps were set and another 15 were set near the kitchen/canteen at the base camp.

DAY 2: The technical session on the second day started with the presentation of Paul Racey, who gave a vivid introduction of bats, their general features, evolution, taxonomy, distribution, feeding ecology, echolocation and conservation of bats.

He then discussed about the survey techniques and study of bats. Different types of nets to survey bats such as Mist nets, harp nets, canopy nets, bat detectors, flick net were explained. Paul also explained about the foraging strategy of different species/family of bats.

Paul then explained about the use of dichotomous key and character matrix for the identification of bats in the field. He then explained about the sexing, the breeding condition of the bats such as lactating or not and pregnant or not etc, and estimating the age of the bats.

Field session: Three mist nets were set in and around the different buildings of the TREE centre. However, no bats were caught. However, bats were seen flying all over there.

DAY 3: The day started with checking the traps. One *Rattus rattus* was caught from the natural forest patch and a *Mus booduga* was caught. The latter was caught in multiple capture trap, which actually is quite good for small body sized animals. Mike demonstrated the handling, weighing, sexing, measuring, photographing and finally the release of the animals. In the afternoon session of the trap checking a *Funambulus palmarum* was caught, the same was also processed and released.

Paul Racey started the technical session on the 3rd day by explaining the different methods of marking the bats, such as temporary marking (marker pen, nail varnish), permanent marking (forearm bands/rings, necklace, tattooing, bleaching the fur etc). Study of the foraging behaviour of the bats, radio tracking studies, use of bat detectors etc were explained by Paul.

Nameer Ommer demonstrated the dry skin preservation techniques (carding) and preparation of the skull for storage in the museum. Voucher specimens are of extreme importance in the study of small mammals. It helps us to sort out taxonomical issues such as the identity of the species. Some of the advantages of the carding, when compared to that of wet preservation are a). it helps to retain the original colour and the shape of the animal for a longer period of time, to a great extent. b) it helps us save considerable space in the lab or museum. Moreover, it is

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also a very simple technique that can be done right in the middle of the forest/field station. All that what is required is only a pair of scissors and borax powder.

Field session: During the mist netting session in the evening two bats were caught out of the three mist nets kept. Paul Racey explained the method of processing the collected bats, including handling, removing the bats from the mist nets, recording the measurements, sexing, estimating the age, the reproductive condition of the bats etc. He also explained how to identify the bats. The bats caught were identified as *Pipistrellus coromandra* and *Hipposideros speoris*.

DAY 4: The day started with checking the Sherman traps. One *Rattus rattus* and *Mus booduga* were caught. The handling and processing of the animals were demonstrated by Mike.

The technical session of the day was started by the presentation by Paul Racey on the dietary studies of the bats, wherein he explained about different techniques to study the dietary preferences of both fruit bats and insect bats.

This was followed by a panel discussion on survey protocols of Volant and non-volant small mammals. The discussion was led by Paul Racey and Mike Jordan, during the course they answered different field related questions of the participants.

Mike Jordan illustrated about the importance of small mammal conservation with several examples. He explained about the threats to the small mammals such as habitat loss, introduction of alien and invasive species, predation, disease, habitat destruction, habitat degradation, all of which lead to habitat fragmentation.

Wipula Bandara Yapa made presentation on an "introduction to Sri Lankan Mammals" with particular emphasis on small mammals. This was followed by a presentation by Nameer Ommer on the CAMP process and the results of the CAMP on small mammals conducted by ZOO/CBSG South Asia on small mammals during 2002 and 2004 on Volant and non-volant small mammals respectively.

Field session: The evening mist netting was done on the bank of the Mahaveli river, which incidentally is the largest river in Sri Lanka. The mist nets were set across the Minipe canal, just underneath the one of the bridges. There was a roost below the bridge and within about 30 minutes of setting the net we caught about six bats. Explained the use of identification keys, Paul Racey also made use of a key prepared by Sampath de Alwis Goonatilake. With the help of the different keys, we reached upto the genus of the species caught, as *Myotis*. It was identified either as *Myotis hasseltii* or *Myotis horsfieldii*. Sampat and Yapa are studying the cranial and dental characters of the bats to confirm the identity. If it *Myotis hasseltii* then it is a rediscovery of the species after Phillips who located it in 1930's and if it is *Myotis horsfieldii* it will be a new record for the country!!.

One of the net was kept across a trail passing through the forest patch. One *Cynopterus sphinx* was caught in that net.

DAY 5: The last day of the workshop started with the presentation by B.A. Daniel who explained about the various education activities of Zoo Outreach Organisation, of those related with small mammals and encouraged participants to initiate education programmes.

Mike, Paul and Nameer then led a discussion on conservation recommendation of small mammals drawing examples from the IUCN redlist categories of small mammals of Sri Lanka. They pointed out the lack of our knowledge about the known species of small mammals of Sri Lanka and warrant more studies on them, one of the main reasons for the conduct of this training workshop here at Sri Lanka is to equip the young researchers to take up this challenge.

This was followed by a discussion on sources of Funding for studies on small mammals, which was led by Paul and Mike.

During the valedictory function all the participants were asked to give commitment to take up some activities towards conservation of bats and rodents. All participants received a certificate of appreciation and a CD containing all presentations of the resource persons and related literature. Dr. Wipula Yapa thanked all the participants for their interest shown in attending the workshop. He also thanked the Zoo Outreach Organisation, particularly Sally Walker for the visionary zeal of organising this kind of training workshop in different regions of South Asia, which would definitely have a long standing impact on the conservation of small mammals of the region in the years to come. Yapa also thanked the resource persons for their time and effort to go over to Sri Lanka to train the young biologists of the country.

