STATUS SURVEY AND CONSERVATION EDUCATION CAMPAIGN : A COMMUNITY PARTICIPATION APPROACH TO PROTECT BATS IN RAJASTHAN PARTS OF THE THAR DESERT

PROGRESS REPORT

RSG 2nd Bat Conservation and Awareness Project (8400 - 2)

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Principal Investigator and Scientist In-charge



COORDINATORS:





FINANCIAL SUPPORT:





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PROJECT PROGRESS REPORT

The work under RSG 2nd Bat Conservation and Awareness Project (8400-2) started in first week of August 2010. The first month was utilized to secure field resources, campaigning material (Fig. 3 - 10) and employment of project staff. Thereafter, months of September 2010 till January 2011 were utilized to undertake core research and campaigning work on bats in Jaisalmer, Jodhpur and Bikaner districts of the Thar Desert in Rajasthan state of India (Fig. 1).

Earlier reported bat roost were surveyed in Jodhpur, Bikaner and Jaisalmer districts while later was thoroughly surveyed to explore new bat roosts. Bat conservation and awareness campaign was launched for the first time in Jaisalmer. All possible target groups such as students of schools and colleges and people living at different settlements across the study area like different villages, *dhanies* and cities were briefed about the nature, ecological and economic importance of bats through the lectures, demonstrations and opportunistic interactive group discussion sessions (Fig. 11 - 28). Through the campaigning exercise we tried to eradicate the existing myths (i.e. bats are generally considered here as signs of sin and people believe that they tend to attack human nose and sucks their blood) and discard the relevant prevailing fear, as well attempted to inculcate the sense of appreciation about bats among the people of this region.

In this phase of the project, Jaisalmer district of the purposed study area in the Rajasthan parts of the Thar Desert, India were thoroughly surveyed for the presence of bat roots and some 55 roosts were observed belonging to five insectivorous (**Earlier reported:** Greater mouse-tailed bat, *Rhinopoma microphyllum*; Lesser mouse-tailed bat, *Rhinopoma hardwickii*; Naked-rumped Tomb bat, *Taphozous nudiventris*; Indian Pygmy bat, *Pipistrellus tenuis* and **Newly reported:** Blyth's horse-shoe bat, *Rhinolophus lepidus*; Geoffroy's Trident bat, *Asellia tridens*) and two frugivorous (**Earlier reported:** Shortnosed fruit bat, *Cynopterus sphinx* and **Newly reported:** Fulvous Fruit bat, *Rousettus leschenaulti*) species of bats.

Observations during this survey revealed that species composition at some of the roosts reported earlier in Jodhpur, Jaisalmer and Bikaner found altered with a few species found missing at some while addition of the newer at others, the details of these alterations will be mentioned in final report of this project. The most useful research finding here through this survey is the reporting of Geoffroy's Trident bat, *Asellia tridens* (Fig. 2) from Gajroop Sagar tunnel roost in Jaisalmer district of the Thar Desert. **This is the first record of this species from India.**

Print and visual media reporters have been approached to cover the bat conservation and awareness campaign in local and national news papers and TV channels.

PROJECT CORE TEAM

However, a lot many people and volunteers are contributing directly or indirectly to achieve the objectives in this phase of the project, here under is the core team who has coordinated and implemented the entire activities in this phase of the project (Fig. 29).

| Designation | Name of the person |
|--|--------------------|
| Principal Investigator and Scientist In-charge | Dr. K. R. Senacha |
| Project Coordinator | Dr. Sumit Dookia |
| Area Coordinator, Jaisalmer | Mr. Gajendra Singh |
| Area Coordinator, Bikaner | Mr. Vigil Wilson |
| Area Coordinator, Jodhpur | Mr. Mahendra Singh |
| Manager Field Activities | Ms. Suman Seervi |



Fig. 1: Map representing study area in Rajasthan parts of the Thar Desert, India



Photograph by Dr. K. R. Senacha

Fig. 2: Geoffroy's Trident bat, *Asellia tridens* reported from Gajroop Sagar tunnel roost in Jaisalmer district of the Thar Desert.



Fig. 3: Design of informative poster developed in A3 size for distribution among target groups and 3 x 5 feet of flex, to display around vehicle hired for field work, as well to use as teaching aid while delivering lectures in RSG Bat Conservation and Awareness Campaign.



Fig. 4: Design of banner developed on 2 x 6 feet of flex, to display around vehicle hired for field work and to use as teaching aid while delivering lectures in RSG Bat Conservation and Awareness Campaign.



Fig. 5: Design of postcard size cards developed of frugivorous bat, Indian flying fox, *Pteropus giganteus*, to distribute and create awareness among target groups during RSG Bat Conservation and Awareness Campaign.



Fig. 6: Design of postcard size cards developed of frugivorous bat, Short-nosed fruit bat, *Rousettus leschenaulti*, to distribute and create awareness among target groups during RSG Bat Conservation and Awareness Campaign.



Fig. 7: Design of postcard size cards developed of insectivorous bat, Greater mouse-tailed bat, *Rhinopoma microphyllum*, to distribute and create awareness among target groups during RSG Bat Conservation and Awareness Campaign.



Fig. 8: Design of postcard size cards developed of insectivorous bat, Lesser mouse-tailed bat, *Rhinopoma hardwickii*, to distribute and create awareness among target groups during RSG Bat Conservation and Awareness Campaign.



Fig. 9: Design of postcard size cards developed of insectivorous bat, Egyptian tomb bat, *Taphozous perforatus*, to distribute and create awareness among target groups during RSG Bat Conservation and Awareness Campaign.



Fig. 10: Design of postcard size cards developed of insectivorous bat, Nacked-rumped tomb bat, *Taphozous nudiventris*, to distribute and create awareness among target groups during RSG Bat Conservation and Awareness Campaign.



Photograph by Dr. K. R. Senacha

Fig. 11: Volunteers and Area Coordinator Mr. Vigil Wilson and Mr. Gajendra Singh while trying to catch a bat for identification purpose at Gajroop Sagar Tunnel roost at Jaisalmer district of the Thar Desert.



Photograph by Dr. K. R. Senacha

Fig. 12: School going children and locals of village Dau in Sum Tahseel of Jaisalmer district in the Thar Desert, while grasping the information written on banner displayed around the conservation education van.



Photograph by Dr. K. R. Senacha

Fig. 13: Glimpse of sandy habitat where our conservation education van got trapped in the range of Desert National Park.



Photograph by Dr. Sumit Dookia

Fig. 14: Principal Investigator and Scientist In-charge of RSG 2nd Bat Conservation and Awareness Project Dr. K. R. Senacha while walking across the typical grassland habitat in the limits of Desert National Park located in the study area.



Photograph by Dr. K. R. Senacha

Fig. 15: Project volunteer and Area Coordinator Mr. Vigil Wilson while briefing about the nature, ecological and economic importance of bats to the primary students at Kohriya village in sum Tahseel of Jaisalmer district in the Thar Desert.



Photograph by Dr. Sumit Dookia

Fig. 16: Girls student of Government Senior Secondary School, Sonu village in Jaisalmer district of the Thar Desert, while grasping the information written on banner displayed around the conservation education van.



Photograph by Dr. Sumit Dookia

Fig. 17: Principal Investigator and Scientist In-charge of the project Dr. K. R. Senacha while delivering a lecture on nature, ecological and economic importance of bats to the students and staff of Government Senior Secondary School, Sonu village in Jaisalmer district of the Thar Desert.



Photograph by Dr. Sumit Dookia

Fig. 18: Principal Investigator and Scientist In-charge of the project Dr. K. R. Senacha while teaching the students of Adarsh Vidhya Mandir of Mohangarh in Jaisalmer district, who were on the way to home after school time, about the nature, ecological and economic importance of bats.



Photograph by Dr. K. R. Senacha

Fig. 19: Glimpse of a mix colony of Greater Mouse-tailed bat, *Rhinopoma microphyllum* and Lesser Mouse-tailed bat, *Rhinopoma hardwickii* found roosted inside an unattended public well of Mohangarh Tahseel in Jaisalmer district of the Thar Desert.



Photograph by Mr. Gajendra Singh

Fig. 20: Principal Investigator and Scientist In-charge of the project Dr. K. R. Senacha while interacting with locals of village Jhinjhiyali in Jaisalmer district of the Thar Desert and inquiring about the possible roosts of bats in their locality.



Photograph by Dr. Sumit Dookia

Fig. 21: Principal Investigator and Scientist In-charge of the project Dr. K. R. Senacha while interacting with locals of village Faledi in Jaisalmer district of the Thar Desert and teaching them about the nature, ecological and economic importance of bats.



Photograph by Mr. Vigil Wilson

Fig. 22: Principal Investigator and Scientist In-charge of the project Dr. K. R. Senacha while interacting with locals of Nachana in Jaisalmer district of the Thar Desert and inquiring about the possible roosts of bats in their locality.



Photograph by Dr. Sumit Dookia

Fig. 23: Principal Investigator and Scientist In-charge of the project Dr. K. R. Senacha Area Coordinator Mr. Vigil Wilson while trying to photograph the newly reported microchiropteran species for India Geoffroy's Trident bat, *Asellia tridens* at Gajroop Sagar Tunnel roost at Jaisalmer district of the Thar Desert.



Photograph by Dr. Sumit Dookia

Fig. 24: Project Area Coordinators Mr. Gajendra Singh and Mr. Vigil Wilson while looking at morphological features of Lesser Mouse-tailed bat, *Rhinopoma hardwickii* out side a microchiropteran roost in Jaisalmer district of the Thar Desert.



Photograph by Dr. K. R. Senacha

Fig. 25: Students of Government Primary School, Chohani village in Jaisalmer district of the Thar Desert while posing with the postcard size pamphlets of bats distributed during the lecture.



Photograph by Dr. Sumit Dookia

Fig. 26: Principal Investigator and Scientist In-charge of the project Dr. K. R. Senacha while demonstrating the types of bats found in the study area to the student and teaching staff of Government Upper Primary School, Hasuva village in Jaisalmer district of the Thar Desert.



Photograph by Mr. Vigil Wilson



Photograph by Mr. Gajendra Singh

Fig. 28: Principal Investigator and Scientist In-charge of the project Dr. K. R. Senacha while delivering a lecture on nature, ecological and economic importance of bats to the students of Government Upper Primary School, Khinwsar village in Jaisalmer District of the Thar Desert.



Photograph by Dr. Sumit Dookia (auto mode)

Fig. 29: Project team posing at sand dune near Miyazlar in Sum Tahseel of the Jaisalmer district in the Thar Desert.



Principal Investigator and Scientist In-charge of this project Dr. K. R. Senacha is a wildlife biologist and one of the renowned bat experts from India. A doctoral from J N V University Jochpur in India, Dr. Senacha works primarily on ecology and conservation biology of species of bats dwelling in Rajasthan and Gujarat parts of the Thar Desert. After completion of his Ph.D. degree he joined BNHS (Dembay Natural History Society), India's oldest and one of the premier wildlife and conservation research organizations, in 2004 as a Scientist and worked there till 2008, and has been a member of international team of scientists working there towards cause and recovery of catastrophically declined global populations of three species of *Gyps* vultures *G. indicate, G. bengaleneus* and *G. temairostris*).

Thereafter till now he is working independently as Principal Investigator and Scientist In-charge of the RSG first and second project which have been sanctioned to him consequently by The Rufford Small Grant Foundation based in London, UK to work on ecology and address the conservation relevant issues of hats of the Thar Desert, India (http://www.ruffordsmallgrants.org/rsg/projects/k. r. senacha). He has published around 40 research papers, conservation notes and articles in journals and magazines of national and international repute (http://www.sites.google.com/site/senacha). He is also associated with other wildlife and conservation research organizations viz., IBCF (Indian Bat Conservation Foundation), Mumbai and ERDS (Ecology and Rural Development Society), Jodhpur in India, and is actively participating in some of their ongoing conservation, rural development and health related programs. He further intends to work on ecology and conservation biology of bats in other parts of northern and central India.

