

Project:

Conservation of Wildlife through Conservation Education
South Mizoram, India
(36.07.08)

Report Submitted by:

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To

Rufford Small Grants Foundation

Overview.

At the onset I express my sincere and warm thanks to Rufford Small Grants for supporting the project.

Implementing the project has been an invigorating experience. Being a part of this project has enabled me to look beyond the single time events and learn the process of developing a conservation education program. This learning I understand would be of great help to me in the time to come.

The scale and pace of operations have given me opportunity to read of the subject at peace and document the process at length. As a corollary in this report I have attempted to share the process.

I have shared select updates which are up on the Rufford website and these I have not repeated here.

The report is spread over 10 sections.

Landscape.
Wildlife documentation.
Film screenings.
Interactions with teachers.
Building of existing platforms.
Successes, learnings and failures.
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Landscape.

North east India and Mizoram.

North eastern India comprising the states of Assam, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Meghalaya and Tripura forms part of a rich bio geographic unit and is among the biodiversity “Hotspots” of the world (*Choudhury 1999, Myers et al. 2000*). Within the hotspot our efforts are concentrated in Mizoram. Mizoram is situated between 21°58 N to 24°35 N and 91°15 E to 93°29 E covering an area of 21,081 sq kms (*Anonymous 2006*). In broad terms, the forests of Mizoram are classified as ‘Cachar Tropical Evergreen (IB/C3)’ and ‘Cachar semi evergreen (2B/C2)’ (*Champion and Sheth 1964*). Its (*Mizoram’s*) land and people have a tendency to being somewhat detached, obscure, and unknown, finding scarce mention in literature, whether historical, anthropological, or ecological (*Singh 1996*).

Saiha and its wildlife.

Saiha, in extreme south of Mizoram, where Samrakshan focuses its attention, has benefited from two wildlife assessments in its southern part. Saiha district covers an area of 1,965.81 sq kms and the headquarters are situated at an altitude of 1,226 mtrs (*Anonymous 2005*). A total of 42 species of mammals were recorded from recent wildlife surveys (*Kiasietlab mountain range*). Of these, 34 species were detected directly during the survey, while the other eight were recorded through interviews with hunters and examination of trophies, animal remains and pets (*Datta-Roy et al. 2007*). The forests (*around Palak Lake*) are rich in palms, rattans, dense canebrakes and reeds along the lake margin. 9 amphibian species and 21 reptiles were recorded in the vicinity of the lake in course of the survey (*Pavar and Birand 2001*). Palak Lake locally referred to as *Pala Tipo* (*Ved et al. 2008*) is an Important Bird Area (IBA) (*Birdlife International 2007*). The district thus harbours rich faunal and avifaunal diversity.

Saiha shares its northern boundary with the district of Lawngtlai. Some of the best rainforest of north east India is found in southern Mizoram, covering parts of the districts of Lawngtlai and Saiha (*Choudhury 2006*). The forest cover offers contiguity with the Blue Mountain National Park (BMNP). The BMNP is located in southeastern Mizoram at 22°39 N and 93°02 E, close to the Myanmar border and the Chin Hills. The total area of the park is 50 km. Phawngpui is the main mountain ridge that extends in a north–south orientation. The altitude of different areas in BMNP varies from 1,000 to 2,157 m (*Ghose 2002*). The important wildlife species are Barking deer, Sambar, Tiger, Leopard, Clouded leopard, Gibbon, Rhesus macaque, Common langur, Capped langur, Stump tailed macaque, variety of birds and orchids (*Gupta and Sharma 2005*).

Landscape is a mosaic offered by shifting cultivation fields interspersed with forest patches. Shifting cultivation typically creates a mosaic of remnant primary forests and successional vegetation-ranging from recently abandoned weedy-herbaceous fallows and bamboo forests, to mixed tree and bamboo late successional secondary forests (*Ramakerishnan 1992*).

Historically Mizoram (*including Saiha*) has been a centre for extensive trapping of wildlife. Long lines of rough fencing were erected in the jungle, with snares set at intervals. Game thus caught commonly included pheasants, jungle fowl, porcupines, deer and wild cats. Intricate traps were set for tigers, elephants and monkeys (*Singh 1996*). Lakhers (*people of Saiha*) have numerous ingenious ways of snaring and trapping birds and animals (*Parry 1932*). The rainy season is the great time of the year with the Lakhers for trapping wild animals (*Lorrain 1912*).

Wildlife documentation.

Recording of species.

'See that bird?' my Dad would say. 'It's a Spencer's warbler. (*I knew he didn't know the real name.*) 'Well, in Italian, it's a Chutto Lapittida. In Portuguese, it's a Bom da Peida. In Chinese it's a Chung-Iong-tah, and in Japanese it's a Katano Takeda. You can know the name of the bird in all the languages of the world, but when you're finished, you'll know absolutely nothing whatever about the bird. You'll only know about humans in different places, and what they call the bird. So let's look at the birds and see what it's doing - that's what counts!

~ Richard Feynman, about how his father and he would watch birds together

We do maintain our lists (*of wildlife sightings*) that we keep on updating for mammals, birds, butterflies and of recent we have added snakes. This is in course of our movement for organizing conservation education action and acts as a big help to the program itself. We have recently initiated documenting our experiences with various wildlife forms in what we call a 'diary form' as opposed to a 'report form'. In the process I have rediscovered my love for writing. Placed below is one of my notes.

"While lying on the bed, after tea, remains my favourite morning activity I went for a walk at Tuipang 'despite' the weather beckoning to do else wise! On reaching the water point from the Circuit House (22.31028, 93.02599) while I was pondering on which of the 2-foot paths I could take; a man washing clothes asked me where I intended to proceed. The look on his face, when I told him that I was talking this walk as I wished to see and if possible, click birds, shall stay with me for some days and more. I started with the lower path, one where I and Manuna (*colleague very well versed with the region*) had seen jhum (*shifting cultivation*) plots undergoing their ritualistic burning process few months ago. Walking ahead I saw a few birds further to my right in the secondary growth of an old jhum plot, but they were too fast for my amateurish birding skills. Wondering when I would learn I reached an abrupt end.

Returning to the water point I started walking on the other path. Few minutes down the line saw a couple of birds on a tree to my left in what seemed to me a not well-maintained orchard. Putting the camera and binoculars down I positioned myself to have a better view of the tree and the bird! After a couple of minutes, I recognized them to be fantails. Recalled Anirban (*colleague and wildlife biologist*) having pointed it out to me during one of our walks in Agraa (*Madhya Pradesh*) during December 2007 (*though I don't recall today which of the fantails it was*). I saw it pirouetting amongst branches and in the meanwhile tried to refer my field guide. Suddenly one of them crossed the path and settled on a bush about 12 to 15 feet from me at about 2 to 4 feet from the ground. I was able to catch it on the binoculars (*pretty quick by my standards!*) ~ It was a White browed fantail flycatcher (*Rhipidura auresia*). The white streak on the brow was distinctly visible. Salim Ali's Book of Indian Birds says of its distribution "The entire Indian Union, extending east to Myanmar, also Pakistan, Bangladesh and Sri Lanka."

It was my first close and confirmed sighting of the bird in Saiha region and I was thrilled. While it may or may not be rare to the region, I was glad like we used to be in our school days on adding a new postal stamp to our collection! I saw it for few minutes chirping and jumping till it left the bush. I had enjoyed seeing the bird enough to exercise photography (*another of my amateurish skills!*)".

Historical information.

Those who cannot learn from history are doomed to repeat it. ~ George Santayana.

Future is determined by how we look at and how much we learn from the past. We have been collating historical information of the landscape; focusing on wildlife. Reference books have been procured, studied and relevant sections typed on to soft. This has given us a glimpse into the amazing place that Saiha would have been in the past encouraging us all the more to conserve what we have today, laid solid information available for us to base our actions and reading the books (*many of them journals of the then British officers*) have given us insights on how to write of our efforts.

Film Screenings.

Film screenings have been an integral component of our conservation education efforts since some time. Point Calimere film we had screened quite a few times in course of our efforts in Mizoram at each of 3 locations of Saiha, Tuipang and Phura. These screenings were to take place after a considerable interval and by a fresh team. This led us to another 'preparation sequence'.

We saw the film twice at our office and John (*colleague*) shared his views on the film and the approach we could adopt while organizing a screening for students from middle schools (*classes 5, 6 and 7*). These would also be John's introductory efforts with film screening and working with me together on a programme. During previous months he had conducted colouring sessions on primates and while I was involved in planning them with him, he was alone during the events. We read write-ups on earlier experiences we had had with film screenings and an article of ours on the topic, got relevant details of Point Calimere from the "Protected Area" list, enlisted mammals and birds depicted in the film segregating them into those occurring in Saiha region and else wise and confirming local names. We also discussed sequences that were of particular interest to us, if they would generate similar level of excitement with students (*and their teachers*) and whether we would pause the film midway at these points to enable us to interact. Broad themes of discussion were narrowed down on and were separated into those to be discussed before screening, during screening and those to be shared post screening. Of course, we also got chocolates for our friends!

Preparations in form of these protracted deliberations are a marked departure from our practice during my stint at our Meghalaya field; of conducting dry runs. These deliberations lay a platform for an accomplished performance as also allow space for further panache.

At the Presbyterian school (*Saiha*) the noise of the students in classes, other than those involved in screening, permeated through to the class of screening. This made it difficult for the audience to catch audio on the computer (*an Hp 14" laptop*) and it was not possible to put the speakers to use either! We realized we will have to scale up our actions of interpreting the film to build and retain interest levels of audience. At times we paused the screening and asked students to identify the species visible on the screen. The answer would generally be in Mara or Mizo (*2 languages primarily used in the region*). As we wrote the English names of the species we asked the students to share the Mizo or Mara names; also having them suggest the spellings of these. This gave them an opportunity to speak out ~ have them involved as and also slowed the process ~ gave them time to absorb and react mid-day.

At the Model school on the Chital (*Axis axis*) appearing on the screen we asked them to identify the wild animal. While some said it was Sakhi (*Barking deer ~ Muntiacus muntjak*) and some Sazuk (*Sambar ~ Cervus unicolor*) few also referred to it as Saza (*Serow ~ Naemorbedus sumatraensis*). We shared the name and took the opportunity to discuss that local names (*Mizo, Mara or Lai ~ 3rd*

language used in the region) would exist for species that occurred in the region. Chital, we discussed, was not found in the region but occurred in large numbers in other places in our country and was also known as spotted deer. I also came across a poster in the staff room that depicted giraffes and zebras! Field guide for mammals we have used to enrich the process by showing select species (*occurring in the film*) in course of the screenings. However, on observing the small sized and allured audience we took a step ahead. We paused the film with a Bonnet macaque (*Macaca radiata*) on the screen and handed over the book to a group of students to find the species; the exercise was repeated with Wild pig (*Sanghal ~ Sus scrofa*). It was heartening to see their large excited eyes scan the book and look for mammals. We then shared briefly of the book.

Removal of species from their habitats (*both ~ hunting and keeping as pets*) is a threat to wildlife conservation in the region. While in the coming period our conservation education program will devote energies to these issues, we contemplated discussing them at available platforms. We asked if they had seen macaque (*ꯀꯪꯂꯩꯃ*) and the answer came in positive with broad locations of residences that had them as pets. Here we discussed the importance of wildlife being in their actual homes. Introducing Point Calimere we discussed local term(s) for lake and moved on to enlisting the major lakes in Mizoram. One of them Palak was situated in Saiha region and while all had heard of it none had seen it! When large groups of birds at Point Calimere appeared on screen we discussed that if we wanted our Palak Dil (*lake*) and other places to have such wonderful friends we would have to quit hunting wildlife (*including use of catapults*).

Organizing the screenings, after a brief hiatus was interesting and I envisage further such invigorating experiences in the coming months.

Interactions with teachers.

We had also organized a program with teachers at our office. These teachers teach in schools we have been associated with. We organized this get-together to:

- ✓ Screen and discuss a conservation film that focussed on teachers.
- ✓ Share of our actions.

They came on time and as we began, we realized that participant numbers exceeded our expectations! We started the film helped with energetic acoustics from our then freshly acquired speakers. The initial silence and confusion moved away their spaces being quickly taken up by excitement and fun.

The film Bagh Sanrakshan – Ek Anokha Prayas (*Tiger Conservation – A Unique Effort*) has been made by Bharatiya Vidyapeeth Institute of Environment Education and Research (BVIEER) and talks of their interesting journey under the auspices of the India Canada Environment Facility (ICEF) project. Participants saw how conservation education was getting priority in various parts of the country and the different programs voluntary organizations undertook towards conservation education with students and teachers. They saw action in classrooms in rural areas, visits by teachers to national parks and bal-mela (*fair organized by students*). While the coverage was limited to the states of Uttar Pradesh and Madhya Pradesh it was fun to see actions like placing pictures of wildlife species on a tree picture based on the position the particular species preferred on the tree and surveys undertaken by students.

Our actions were restricted to pitch in with field-guides (*birds, mammals and snakes*) when wildlife was discussed and help with translation (*Mara, Mizo or English*) when need arose. The idea being

to share the concepts, allow the space to dwell on the same and possibly walk the road ahead together. After the screening we had tea, biscuits and kuva (*paan*) and talked about select wildlife species as we flipped through the field guides.

In the ensuing discussion one of the participants wished that they could be a part of such wonderful and inspiring trainings while other argued saying that it was not training that was pertinent for nature conservation but loving wildlife and respecting God's creations that we had around us. One participant was of the opinion that they should be taken on exposure visits to large zoos like the one at Guwahati (*he later asked me what animals I was fortunate enough to see there*) since it would allow them to see wildlife at close quarters while another held the view that while conservation of wildlife was important and should be practised tasty birds like Khaleej Pheasant (*Vabrik*) should be kept out of the purview! One of them even pushed away the mammal guide on coming across the Slow Loris (*Ruleipa*) picture! I was aware to the belief concerning the shy primate referred to as the boneless, but the extent left me baffled.

Like during the screening our role during the discussion that followed was minimum (*I am re discovering the virtues of speaking less!*). These discussions were open with respect to time and topic and the idea was to get them talking of wildlife and its conservation, put forth their views and perspective.

We shared report on the actions undertaken during the recent past, our plans for immediate future actions and discussed them briefly seeking their inputs in the process. Their interest and enthusiasm play a pivotal role in these.

Building on existing platforms.

In course of our conservation education ~ awareness programmes with Donbosco school we have nurtured an amiable rapport with concerned teachers. One fine day one of them came saying that an exhibition was planned at Saiha and the onus of representing the school fell on his shoulders; besides Donbosco being the host had to do well. This was the State Council of Educational Research and Training (*SCERT*) annual science exhibition and he asked me to suggest possible avenues of participating in an apt fashion. We read the document together and it immediately struck me that we could work under the theme "Conservation of Natural Resources". This also would tantamount to taking our program with Donbosco to the next stage. It also occurred to me was what while I have been talking of generating synergies with state agencies as also working in a reactive mode; this was a God sent opportunity.

We discussed undertaking a survey focusing on Hoolock gibbons (*baubuk - veitu*) in Saiha involving a small group of students and sharing of the process ~ findings as the model we would display in the exhibition. The survey, which would reveal people's awareness and perception of this rare primate, would have multiple choice questions (*on lines of our earlier programme*) and be undertaken within Saiha town. Few phone calls and a meeting later we had 50 copies of the questionnaire and an outline of the method lay in front of us. Time at disposal being short the survey began.

We then met at the school to collate the findings. Students had done a neat job, from writing the numbers on each questionnaire to getting the crux of the findings, and I rediscovered the virtue of non-interference. Since the questionnaires were filled using 2 languages depending on the respondent, we took note of all the responses after translating the ones in Mizo to English. In course of this we discussed the experience of the students and I realized that while they were enthused none of them had seen a Hoolock gibbon.

In the next preparatory meeting, I screened the film “A Hunter’s Tale” to enable them to see the Hoolock gibbon, hear it and get a glimpse of where it lived. This would make it easier for them to talk of the primate. After this we set out to discuss how we would share the findings, the charts we would display and the design of posters. At this stage we realized that we had not coined a name for our project and subsequent scratching of our heads resulted in the project title being “Pride of Maraland”.

A day before the event when we were allotted space to showcase our project, I went to the school to give my limited inputs in last minute fine tuning. We discussed the need to clean the space as also the height at which we would put up the posters. We also got some copies of the questionnaire and the “process” ready in case people attending wanted to know more. The team was busy with the ongoing registrations of the event; schools from all over the state were participating.

While we were not selected for the national level exhibition, we had achieved what we had set to do and had achieved well. We got students involved in an action of conservation education ~ awareness by way of doing surveys and collating the findings, this was a step ahead of our regular interactions with them where in most cases they received information. We got to know how people perceived Hoolock gibbons in a district which has troops of the primate in community owned lands and which is referred to as having the best remaining rainforests in north eastern India. And most importantly we spread two critical messages to students of almost all schools in Saiha who attended the exhibition;

- ✓ Hoolock gibbons need to be conserved.
- ✓ There are efforts ongoing, towards this, in Saiha by way of conservation education ~ awareness.

Successes, learnings and failures.

In times of profound change, the learners inherit the earth, while the learned find themselves beautifully equipped to deal with a world that no longer exists.
~ Al Rogers.

As we evolved during the period into a unit that focused solely on conservation education, we got sensitive to the nuances associated with the program and dwelled on them. We realize today that most of the available material on conservation education caters neither to rural children nor adults; 2 segments we believe are our core partners in the program. Therefore, rather than seeking readymade solutions we need to augment our capacities with respect to:

- Nature (*awareness and sensitivity*)
- Communications.

Our conservation education actions will thrive on the synergies generated by these skill sets.

We have also realized that conservation education needs to be a series of interactions using varied set of tools repeatedly over a period of time with the same audience rather than a one-off event. Each of these interactions needs to be very well planned and worked upon. While the idea is to raise awareness and sensitivity of the audience, we need to perennially focus on their being comfortable and interested during the sessions.

We have put in place a system whereby we document our observations on our efforts. This has helped us to relive some of our experiences. We are able to analyze them critically that we may be able to perform better as also take pride in them that we get the energies to look forward to the next action. Some of these observations are shared below.

Drawing parallels with familiar situations, species etc.

While talking to, or rather, interacting with students we realized that when putting across a novel idea or concept or even a name of a wildlife species comparisons are a great helping hand. While talking of Serow, the state animal, we discussed how its ears resembled that of a donkey while its body was larger than that of a goat (*kel*). While discussing “Mizoram State Wildlife” where we talked of National Parks, Wildlife Sanctuaries, Important Bird Areas, State Bird & State Animal with a youth association at Phura, to put across the concept of state bird and state animal as being species that were relatively more charismatic than other species, we discussed how select political leaders were more charismatic than their counterparts!

Putting forth examples too has been of immense utility. During interactions with the youth association focusing on National Parks and Wildlife Sanctuaries, to share with the participants that these were not necessarily “large areas of forests away from towns and full of wild animals” we gave examples with photographs making attempts to restrict the examples to the “seven sisters” so as to enable the participants to relate better to the examples. We talked of the Nokrek National Park (*West Garo Hills ~ Meghalaya*) that has primarily been created to preserve the citrus species occurring in wild in the landscape and the Pitcher Plant Sanctuary (*South Garo Hills ~ Meghalaya*) that is less than 1 sq km in area and has been created with a view to protect primarily one species – the Pitcher plant (*Nepenthis khasiana*).

Pace.

Few months down the line in the program realized that pace of our “implementing” modules with students needs to vary depending on factors ranging from the location of school (a remotely located school in a small village was different from the Don Bosco School at district headquarters) to the familiarity of the topic to the students (*Palak lake of the myths and folklores was different from the Palak lake that was an Important Bird Area*). At Kaisih (*near Phura*) during interactions on the module “Wildlife in Saiha” during the initial 15 minutes we discovered new levels of lack of interest with one 1 student out of 14 coming up with any kind of responses! We took an unplanned “water break”. As the students returned, we began to discuss issues on their village that they possessed proficiency on and got them talking and involved and then got them one by one to read the slides that we had prepared.

On similar lines during a session on the module “Hoolock Gibbons” at Donbosco School Saiha we figured in the initial stages that on account of our familiarity with the topic we were rushing away without forging the desired level of connect with the students (read failing in our efforts). Changing gears we slowed down the pace by talking one after another in Mizo and English in lieu of only one language ~ Mizo and also got on to lengthier interactions on local names of wild species by asking students to come and write the respective names in Mizo, Mara or Lai on the board.

Communications on Wildlife Conservation by all means make more sense when amidst Wildlife rather than in classroom or living rooms in towns. These could involve actions like birding and one can place emphasis on raising interest levels by nurturing curiosity and encouraging deliberations rather than giving names of mammals or birds. Steve Van Matre says on this

“Names are like landmarks; you don’t need very many of them to find your way”. This we see as the logical step for our conservation education action and believe it is pertinent since the younger generation in Saiha too is disconnected from nature like their counterparts in cities.

Feedback

Inculcating feedback within our ongoing conservation education and awareness program is an action the need for which we have ever agreed upon but seldom moved beyond! The reactions and perceptions of the participants (*and non-participants*) towards the efforts are pertinent towards designing the next stage of the program as also comprehending the efficacy of the actions being undertaken.

While seeking feedback by way of feedback-forms towards end of sessions is an idea that has never appealed to me select communications during the period have however led me to understand that the program is moving ahead on desired lines.

A student from Donbosco school where we regularly organized our programmes during the previous academic year on coming across us at the Saiha market asked if we would during the coming academic year organize programmes for the class he has just moved to? The smile and affirmative nod on my face had him immediately suggest that unlike the previous year where we only ‘talked’ of usage of binoculars we should arrange for him and other participants to feel and use them! The excitement in his eyes stays on with me~

The other day we got a call from a teacher at Donbosco who has been closely associated with our programmes saying he had just returned from a visit to a friend in town and had seen a pet ~ a baby monkey from the wild. He thought it was the Hoolock gibbon that we had discussed (*with help of pictures*) in course of our sessions but was unsure on account of the baby being very young. He asked if I could come with him, take pictures of the ape and explore possibilities of it getting to its ‘actual’ home.

I continue to strive for pertinent tools to receive feedback.

Partners.

Countless people (*many of whom I am shameful enough to forget names of*) who have welcomed me and shared their houses for our visits (*including announced night halts*), vast knowledge of landscape, loving cups of tea with fresh puris and warmth that has enabled me and my colleagues to perform as we have.

Our primary partners in efforts here have been friends at forest department of Mara Autonomous District Council. Without their cooperation working as we are would have been unthinkable.

Principals, teachers and students of schools that we have had programmes at we are indebted for their faith and trust in us for what was a first activity dedicated towards conservation education in most schools. I acknowledge the encouragement by District Institute of Education and Training (*DIET*).

Kashmira Kakati, Aparajita Dutta, Will Duckworth, Kishen Das, Janaki Lenin, Nandini Rajamani, Dharmendra Khandal, Suhel Quader and Firoz Ahmed have made life easier at Saiha by helping with identification of pictures of alive, freshly dead and museum specimens as also

sharing of documents at short notice. This despite their frequent requests for our clicking better pictures!

Pranav Trivedi, Seema Bhatt and Sujatha Padmanabham we are thankful for interactions that helped me tune our efforts. ATREE and Sunita Rao I thank for enabling me to be a part of the Conservation Education network.

Arpan Sharma, Pankaj Sekhsaria, Yash Shethia and Chinmay Oza we thank for inputs in editing our thoughts (*structured, unstructured, nascent and developed*), texts and photographs over short emails, phone calls at uncanny hours and short bursts on google chat.

Sally Walker and Marimuthu Rengaswamy at Zoo Outreach Organization have been consistently with us handholding and encouraging since inception of our field base. Kalyan Varma is acknowledged for sharing his film.

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Finance.

The amount granted under the project has been utilized in the project as below.

<u>Particulars</u>	<u>Amount (INR)</u>
Salary	2,11,582.00/-
Boarding Lodging	43,440.00/-
Communications	35,204.00/-
Institutional Overheads	34,761.00/-
Reporting Documentation	40,515.00/-
Travel	45,747.00/-

<u>Total</u> :-	4,11,249.00/-

Rupees four lakh eleven thousand two hundred and forty-nine only.

References.

- Anonymous (2005) *Statistical Handbook, Saiha District*. Department of Economics and Statistics, Saiha, Mizoram.
- Anonymous (2006) *Mizoram Forest 2006*, Department of Environment and Forests, Aizawl, Mizoram.
- BirdLife International 2008 BirdLife's online World Bird Database: the site for bird conservation. Version 2.1. Cambridge, UK: BirdLife International. Available: <http://www.birdlife.org>.
- Champion, H. and S. K. Seth. 1964. *A revised survey of the forest types of India*. Forest Research Institutes and Colleges, Dehra Dun.
- Choudhury A. U. 1999. Mustelids, viverrids, and herpestids of northeastern India. ENVIS Bulletin: Wildlife and Protected Areas. 2(2): 43–47.
- Choudhury A. U. (2006). The distribution and status of Hoolock Gibbon, Hoolock Hoolock in Manipur, Meghalaya, Mizoram and Nagaland in north east India. *Primate Conservation* 2006 (20): 79–87
- Datta-Roy, A., Sharma, A. & Azyu, T. T. 2007. Kaiseitlah Conservation Area: survey for wildlife values. Final Report. Samrakshan Trust and E & F Dept, MADC.
- Ghose D (2002). First sighting of clouded leopard *Neofelis nebulosa* from the Blue Mountain National Park, Mizoram, India. *Current Science*, Vol. 83, No. 1.
- Gupta A. K. and Narayan Sharma. (2005). Conservation status of Hoolock Gibbon in Mizoram. (in). Conservation of Hoolock Gibbon (*Bunopithecus hoolock*) in northeast India. ENVIS Bulletin: Wildlife and Protected Areas, Vol. 8. No. 1, pp 27 – 86.
- Myers, N., Mittermeier, R. A., Mittermeier, C. G., da Fonseca, G. A. B. & Kent, J. (2000). Biodiversity hotspots for conservation priorities. *Nature* 403: 853–858.
- N. E. Parry. (1932) *The Lakbers*. Firma KLM Private Limited. Calcutta. 613 pages.
- Pawar, S. and Birand, A. (2001) A survey of amphibians, reptiles, and birds in Northeast India. CERC Technical Report #6, Centre for Ecological Research and Conservation, Mysore.
- Ramakrishnan, P.S. (Ed.) 1992. *Shifting agriculture and sustainable development: an interdisciplinary study from northeastern India*. 1st ed. Unesco, Paris. 424 pages.
- Reginald Lorrain (1912) *5 Years in Unknown Jungles*, Lakher Pioneer Mission. London, 264 pages.
- Singh, D. (1996) *The last frontier: people and forests in Mizoram*. Tata Energy Research Institute. New Delhi. 301 pages.
- Ved N,S Lalramnuna, A Sharma and T Azyu (2008) Employing Conservation Education to secure the Palak Lake Ecosystem – Mizoram (India). Selected for Poster presentation at Asian Wetland Symposium 2008.