

discover sri lanka tours and help conserve sri lanka's biodiversity, culture and wildlife nature tourism, eco adventure, beaches and scenery

Sri Lanka wildlife conservation, wasgamuwa elephants, people, human elephant conflict, leopard bear research volunteer

conserve wetlands jungles forests fauna flora mammals in sri lanka

find out about the work of

Field Scouts Program -Initial Training

-Sharon Brooks-

- [Scientific Aims](#)
- [Study Site](#)
- [Methodology](#)
- [Problems and Solutions](#)
- [Output](#)
- [Elephant Observations](#)
- [Elephant Raids](#)
- [Elephant signs](#)

- [Dung transects](#)
- [Bird Observations](#)
- [Land-use transects](#)
- [Habitat surveys](#)
- [GPS training](#)
- [Computer training](#)
- [Field Scout Profiles](#)
- [Recommendations for continuation of the project](#)

The Field Scouts Program Proposal

Background

The Himbilyakade forest in the Matale district extends from the knuckles ranges to Wasgamuwa national park. It is an area of continuous forest that is known to be used both by people in the local villages adjacent to the forest and by elephants. It is unprotected areas such as this that are vulnerable to human encroachment further fragmenting the forests of Sri Lanka with severe consequences for elephants and other wildlife. Villagers use the forest for firewood, timber, honey and meat. However, the extent to which it is used by elephants and other wildlife is largely unknown. Research is required within this area to establish the diversity and abundance of wildlife, in particular elephants that occur within this forest. This information is required to establish what conservation measures should be implemented, if any, for the long-term survival of the wildlife as well as local livelihoods.

The human threat to elephants also occurs when the elephants enter the villages to raid crops and houses. The SLWCS has been working since 1998 to try and resolve this human elephant conflict (HEC). Scientific research on the nature of these raids is required to support these efforts.

The field scouts program is a community integrated field research program that involves training villagers to carry out the data collection, data storing and some limited analysis. The advantages of training villagers as opposed to employing non-local trained ecologists are as follows:

- Facilitation of long-term monitoring and surveying of wildlife by providing resident researchers.
- Capacity building increasing the ability of villagers to gain revenue through conservation.
- Increased environmental awareness and appreciation of nature by locals who are otherwise likely to have adverse impacts on the environment.
- To obtain local support for the entire project and avoid conflict that often arises between local habitants and non-local scientists as a result of their differing interests.
- Reduced costs in conducting long term field research

Scientific Aims

- To develop a database of the spatial and temporal distribution of the local elephant population within Himbilyakade forest
- To gather scientific data on the frequency and nature of elephant raids within the local villages.
- To develop a bio-map of Himbilyakade forest that connects Wasgomuwa national park to the Knuckles ranges, that is largely unstudied.

Study Site

(c)(r)Sri Lanka Wildlife Conservation Society

www.SLWCS.org ; info@slwcs.org

Ecological research: Himbilyakade forest in the Wilgamuwa Divisional Secretariat of the Matale District

Training: Villagers from the Wilgamuwa Divisional Secretariat, Matale District.

Socio-economic development: Villages bordering the eastern side of the Himbilyakade Forest Reserve in Wilgamuwa Divisional Secretariat of the Matale District.

Methodology

Seven villagers that have education to A-level standard who have expressed an interest in science will be recruited to undertake this training program. They will be paid a monthly stipend as an incentive to stay committed to the program

Training will be offered in the following fields:

- General research methodology and data collection
- Equipment usage: GPS, binoculars, field guides, spotting scopes, night vision equipment, digital camera, and computer (excel and word).
- Recording information on crop raiding elephants
- Elephant surveys and population monitoring
- Identifying and recording the presence of other mammals, birds, plants and reptiles and amphibians.

Problems and Solutions

Lack of understanding of the importance of rigorous data collection could lead to field scouts cutting corners and falsifying data. This may be avoided by regular accompaniment into the field either by SLWCS staff or foreign volunteers. Foreign volunteers would assist the local field scouts and will not take the lead in the data collection. Wildlife experts that provide the training will hopefully inspire the field scouts to willingly collect genuine data.

Output

This information will enable the development of appropriate conservation strategies within the area that will benefit both the environment and the local people that live adjacent to the forested areas. Both elephants and people are known to use the forest and this research will help find ways that the forest can be managed to sustain both populations. The involvement of local people in the development of such strategies will help to prevent opposition and future occurrences of possibly illegal and environmentally destructive activities.

Phase 1: General Research Training Sessions

12/08/03 – 17/09/03

This phase will provide an introduction to ecological research. They will be guided through the process of research from posing the question, stating the aims, designing a method, collecting data, analysing data, producing results and drawing conclusions. The training will focus on data collection but through providing an understanding of why the data is collected and how it is used they will hopefully be more enthusiastic in collecting accurate data. Short research methodologies will be devised to give practical experience of data collection within and around the villages. Although some time will be spent on collecting data on elephants observed, elephant signs and on elephant raids, data will also be collected on birds, trees etc in order to get more practice in recording information as well as get enough data for data handling and analysis training sessions. It will be important for them to see the results that their data shows in order to fully understand the research process.

Through this they will learn how to use a GPS, binoculars, field guides and computers. It will also serve to develop their species identification skills, in particular birds so that they will already be familiar with at least the common ones of the area by the time training sessions in bird research are introduced. The most important outcome of this phase however will be the development of their observational skills. They will be asked to draw birds, elephant features etc. and to record information about what they see. They will be provided with some basic facts about elephants and how to record sex, size class and distinguishable features for individual recognition. Once they have had some basic practice in these areas the training session with elephant experts should be far more effective. We will do some of the baseline work for elephant research mainly through locating elephant routes into the village and sites for observation.

The training sessions will be given in English and then translated by Jagath. This will serve to improve their English and in particular will offer vocabulary in the relevant areas. They will be given some vocabulary that will consist of words that are regularly used. English lessons starting in January will aim to improve their general spoken and written English that will back up their scientific vocabulary.

The following people are attending the program:

Jagath E. Age 23. Science A levels. (Project leader). HG
Thushara E. Age 20. Science A levels. HG
Jayathilake. Age 20. WG (Fence operator)
Maduranga A. Age 23. Science A levels
Veroni L. Age 26. A Levels (including geography). GP
Anuradha J. Age 18. Arts A levels. HG
Sandamali S. Age 20. Arts A levels. HG

Village codes

Gamburu-Oya/Pussellayaya (GP)
Weheragalagama (WG)
Hundungamuwa (HG)

Summary of Phase I

On the initial session the field scouts were provided with an overview of the project and the proposed schedule for this initial phase as well as some basic information on research. Explanation of the aims of the project along with some information about the area to be studied and the type of questions to be addressed and the need for scientific data as opposed to ad hoc observations was given. They were provided an overview of ecological research guiding them through the process from stating aims to drawing conclusions. The type of research that we want to carry out on elephants was explained, including what questions we want to answer and the methods we will use. These will include; Elephant observation to determine frequency of elephant visits to the area, long-term seasonal changes, herd composition and if possible identification of individuals. Data collection on elephant raids through visiting damaged properties and interviewing homeowners to determine frequency of raids, extent and type of damage, locations, how the fence is breached, herds or solitary males etc. Data collection on elephant signs by counting and measuring dung/footprints to determine frequency of elephant visits, size and number of individuals). Some basic information about elephants and how to record size, sex etc. was also given.

Elephant Observations

Elephants were observed in areas around the tanks. Data was collected for each elephant sighting, including date, time, location, number of elephants and herd composition. Where a single elephant could be clearly observed data was collected for individual recognition. This included information on ear folds, lobes, tail length, tufts, scars, wounds etc. Following a visit to Wasgamuwa national park where they recorded elephants using a video camera, features that enable individual recognition of elephants were recorded from the video. This proved to be an excellent learning tool as it is much easier to explain what you want them to record from a video than in the field and it gives the chance for them to discuss how they categorise various features and it also allows you to assess how consistent the group is.

Elephant Raids

Following an elephant raid into one of the villages the field scouts visited the sites of damage to collect data. They would interview homeowners to collect information about the elephant event including number of elephants, time and duration of visit and type and extent of damage. Some of the earlier data was entered on to an Excel worksheet. Most of the data was not entered due to time constraints. See attached (Elephant raid worksheet).

Elephant signs

Footprints, dung and other signs of elephant presence were recorded and measured in areas around the villages where elephants are known to occur, such as the littoral area of the tanks as well as the fence line. The aims of this research were to determine the frequency of occurrence and the identity of size classes of elephants occurring there. Around the fence line this could be interpreted as an attempted raid

and proximity to fence was also recorded. These methods were partly developed in the field through discussion with the field scouts. As these methods require regular visits in order to get any results the methods were discussed as to what results you might get over time and what they would mean.

Dung transects

From randomly selected fence post transects were walked through the forest at a direction perpendicular to the fence line. Fresh dung was measured and recorded including distance from the transect line.

Bird Observations

Bird Identification exercises. They were shown how to operate binoculars, do line drawings of birds with labelled features and how to identify species with the use of field guides.

Bird observation and data collection. Data was collected on a chosen species using the scan sampling method to gather information on abundance, habitat use (substrate) and behaviour. Overtime the scouts became familiar with several species that frequented the area, largely the water birds, and were able to record species diversity.

We had a session to summarise our bird data collection, stating the aims of our research and how our data will meet these aims. Some of the data was entered into the computer and some basic analysis (means, percentages) carried out using excel to produce some results that were discussed. See attached (bird observation worksheet).

Land-use transects

Transects were carried out from randomly selected points within GP village to assess land-use. 500m transects were walked from a single start point and direction was changed every 100m. Direction was selected randomly from a 180 degree field perpendicular to the line of the previous transect to avoid cutting back across the same area. Land use was recorded for every metre of the transect. The field scouts established the various land-use categories themselves. This information was entered into the computer and some basic analysis was carried out using Excel to obtain some results. These analysed data are on the FSP computer in Handangamuwa. Location of transect can be seen in GPS map attached.

Habitat surveys

The concept of surveying habitat was explained. We carried out an exercise to look at aspects of forest structure, namely tree density and tree size. In an area of forest around WG village random sample points were located from fixed points along a path. From each point 100m apart, 3 random sample points were located. From each sample point information was recorded on data sheets on tree density by measuring distances to nearest trees, height using categories and size by measuring the DBH of trees at each sample point. Position of transect path was recorded using GPS. This information was entered into the computer and some basic analysis was carried out using excel to produce some results that were then discussed. See attached (Habitat survey worksheet)

GPS training

They were shown how to record waypoints, use tracklog as well as how to use the device to record distance travelled, speed, altitude, direction etc. They were shown the information being downloaded on to the computer for them to understand its map building purpose. Some maps of the area have been created that show locations of transects, elephant sightings etc. See attached (Wasgamuwa villages_map)

Computer training

They were introduced to Microsoft Excel and Word. Most time was spent using Excel where they entered data, both data that they had collected as well as data collected from a social survey carried out in one of the villages. They also learnt how to carry out some basic analysis such as percentages, averages, totals etc. However much of the training focused on how to actually operate a computer; use a mouse, navigate the keyboard etc.

Throughout this training session a determined effort was made to ensure that the field scouts understood the purpose of each of the exercises carried out. They were continuously asked to state the aims of the research methodologies they were carrying out and at times were asked to identify biases in the methodologies to try and involve them in developing and improving methods. This aspect was relatively minimal as a fair amount of consistency was also desirable but they were asked to explain the purpose of certain aspects of the research, for example the purpose of randomly selecting start points of transects. It was clear that to simply ask them if they understood was not sufficient and that they needed to be asked to explain it back to you. It also became necessary to directly aim a question at a person, particularly the girls that were far more reluctant to speak out.

At the end of this phase of training we held a discussion to recap on all of the research methodologies that we had covered. This also provided the opportunity to put the training in context so that they could start to understand how the various research methodologies that we had covered can be useful.

All of the field scouts attended the symposium on Human Elephant Relationships and Conflicts held 19th – 21st September 2003. Although they could understand very little of the content this gave them the opportunity to see how this kind of research is used and presented. They were able to follow the structure of some of the talks that led you through their research from aims to conclusions. They also identified research being presented that was similar to the research we had been doing as part of the training. They had previously been provided with scientific English vocabulary and I had been consistent with the terminology I used so they became fairly familiar with the English terms for the research they had been learning about.

Field Scout Profiles

Jagaths understanding is extremely good and he is the most dedicated of the team and the success of this phase can be attributed to this. It was necessary for him to understand the concepts fully in order to explain to the others, direct translation would not have been sufficient. He is extremely practical and keen to learn anything new and picks up new concepts and skills very fast. It seems he, like the others, struggles with the motives behind research and conservation and is always looking for more direct benefits, but he is interested all the same and the more he learns the more it seems to make sense to him.

Thushara also shows a good understanding and an enthusiasm for science. It became apparent at the symposium that he has a genuine interest in this field. He is often the first to answer questions and he is also very inquisitive. He is extremely humorous and brought the team together well making the work good fun for everybody.

Maduranga, like Thushara, demonstrated his interest during the symposium. He already had good English and therefore could get more from the training by being able to understand some of it directly. He appears to understand the concepts well and often offers to explain it to the others.

Jayathilake understands far less than the other boys but is far more practical and observant in the field. He shows the best knowledge about the elephants in the area as he has come in to a lot of conflict with them in the past. He is the only one in the group without A levels and understandably so seems to struggle more with the science.

Sandamali is very reliable and keen to learn. She struggles with the science and is not as practical as the others in the field but she perseveres with it. She shows good computer skills and seems to really enjoy that aspect of the research.

Anuradha is the youngest of the team but seems relatively independent and practical. She like the other girls is quite shy and reluctant to speak but happily takes part in everything.

Veroni appears to be the most practical of the girls. Although she is very shy to speak she shows some initiative and has contributed freely when things are being discussed.

The girls, having not studied science before and being more reluctant to speak out and initiate anything rely quite heavily on the boys to do the talking. They also tend to work quite separately from the boys. However the girls are far more reliable and conscientious. Therefore they all make up quite a complementary team. I would suggest that it would be better on occasions to split them in to two smaller mixed teams to encourage the girls to work more with the boys. Overall they have formed quite a cohesive group, those that understand more help the others and Jayathilake brings a good practical component to the team. They seem to enjoy this kind of work although the exercises have been varied, which is not very representative of field research in reality. They are certainly keen on the opportunity to work within their village and their interest in the subject seems to be growing with their knowledge. This is especially the case for Jagath, Thushara and Maduranga, all of which chose to study science at A level.

Recommendations for continuation of the project

These people will be very capable of carrying out research but it will take a long time before they contribute initiative and ideas to the project and are able to work independently. In order to get these

people to the level required for them to carry out essential research in this area they will need extensive input from experts and constant supervision for several months. A permanent field researcher would be needed to lead the research and supervise the field scouts.

Regular input from wildlife experts would be required to develop some research methodologies with the field scouts and to give them a good understanding of that particular research.

A permanent or semi permanent field researcher would be able to assist and learn from these sessions and then supervise the continuation of the methodologies put in place. This way I think it would be possible to get reliable data collection. Although the priority should be the training rather than the actual research if supervision is good enough that reliable data could be collected through such training sessions there may be more incentive for wildlife experts to come and give their time to the project.

In the future there may be potential to use paying volunteers to work alongside the field scouts but for at least the next 6-12 months I think it would only be desirable to recruit experienced people to the project (the time frame is dependent on the extent of training). One option is to seek collaboration with other institutions who may offer to send their staff for short periods. For example some zoos in the UK often offer support to in situ conservation projects that complement their ex situ work and in such cases sometimes send members of their staff to work on the projects. The education departments often become involved in this aspect. Obviously any Sri Lankan organisations such as FOGL would be favourable. However regardless of whether this is possible you still need this project supervisor to offer consistency and continuity to the training. I think that the best option is to advertise for a person or even 2 people similar to myself; a BSc/MSc graduate with experience of field research and ideally with experience of working in a developing country. It may be necessary to offer a stipend of approximately Rs10,000 per month in order to get sufficient time commitment to the project and/or a contribution to the cost of a flight. I would perhaps advertise for 3-6 month placements.

I think that it is necessary to clearly define the role of any person that you recruit for this position and to not expect that person to be responsible for setting up the actual training sessions with experts. Particularly if this person is a foreigner this is not a very easy thing to do, owing to the relatively short time frame that they would be there for and I think that their time would be put to far better use in the field with the field scouts.

The possibility of sending some of the field scouts to work on the Yala project to gain experience would be very desirable. I think it would really help to enthuse the field scouts that would then hopefully be more capable of helping to develop the methodologies in Wasgamuwa. Ideally the project supervisor would also accompany them on any field training trips. Although it would be good for all of the field scouts to have a basic understanding and training in all aspects of research, owing to the variation in their abilities it may also be favourable to assign different people to slightly different training in order to work with their strengths. For instance, just to pick out the two extremes, Sandamali could receive more computer training and Jayathilake could focus more on the field work.

Updates to SLWCS website

•
[Video and Image Banks](#)

•
VOLUNTEERS NEEDED - [Winter Migratory Bird Census](#), [Elephant and Leopard Research and Teaching English](#)

•
[Travel and Support Conservation](#)

[Video](#) and [Image](#) Banks

volunteer work on migratory bird survey in sri lanka with avifauna turtels and islands by boat on the sandy beach

VISION: To help protect and conserve the diminishing biodiversity of Sri Lanka and to make the local and international community aware of its endangered status.

MISSION: To enable communities to balance ecosystem protection and economic development by pioneering a model for sustainable conservation.

(c)(r) 2006: Please acknowledge the "Sri Lanka Wildlife Conservation Society" if any material from this website is linked, transferred or published. Always refer to www.SLWCS.org in the quotation.