

**Conservation methods for wildlife inventory and monitoring.
Training course: 1 June- 7 August 2005**

Report

**Training Centre, Lopé National Park
Republic of Gabon**



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SUMMARY

This report details the second in a series of annual training courses which run as part of the regional monitoring programme run by WCS in the Western Central African Region (Gabon, Congo, Nigeria, and Cameroon). These courses are aimed at potential or actual conservation professionals who would work in the field, long-term, collecting and managing data on large mammal abundance and human impact on protected areas in the region.

Trainees were selected from different WCS projects across the region. Choices were made by the country programs and site managers from their existing staff and /or collaborators in CNPN or other ONGs. Only one person this year came from outside the existing staff / collaborators: a young MsC graduate. The course lasted ten weeks at the Lope training Centre, a WCS facility in the centre of Gabon. As in 2004, the course included both theoretical and practical classes, and two field trips- one in a wildlife-rich, protected environment, one in a lightly hunted area with lower mammal densities.

All the trainees finished the course. All returned to their Projects apart from the non-staff member who will receive further field training.

Introduction

In the Central African region, several new protected areas have been created since 2000. Of these are the 13 National parks created in 2002 in Gabon, a National park in the centre of Cameroon, and various smaller sanctuaries. Importantly, for support and funding opportunities, the recently initiated Congo Basin Forest Partnership (CBFP) includes in its vision the development and improvement of ecological and socioeconomic monitoring, and, importantly, the integration of monitoring with management in order to adaptively manage conservation landscapes across the Congo basin.

WCS is currently present in a number of protected areas and matrix habitats in the region, and has, in partnership with governments, logging companies, and other NGOs, been carrying out research on wildlife and conservation and the development of ecological and monitoring methodologies over several decades in the Congo basin. Of immediate concern are two things:

- Lack of recent, or accurate, or, indeed, any baseline biological and socioeconomic data for some areas;
- Lack of monitoring programs for most existing forested protected areas in the region.

The first step in addressing these concerns is to ensure that there are enough field staff ready to work in the region. At present the regional biological training facilities tend to be focused on agriculture and industrial logging, as practical disciplines, or on purely theoretical lines which provide a graduate with a diploma in biology, but with little or no practical experience or knowledge. In the recent past (1997-1998) two field training courses (Gamba in Gabon, and Nguti in Cameroon) were designed and run by WCS (or co-run with WWF), organised by Lee White, Bryan Curran and many other colleagues. These tended to be general field method courses, but with a strong emphasis on wildlife surveys and conservation-focused data collection and interpretation. In 1999 a similar course was organised, again by Lee /Bryan/ WCS in Nouabalé-Ndoki,

Congo, which trained a number of people for the MIKE (Monitoring of Illegal Killing of Elephants) program of CITES. This again focused on survey methods, specifically estimation of densities of elephants, apes, and other large mammals, and data analysis and report writing. In 2003 similar MIKE- hosted courses were run in Somalomo in Cameroon and in Bangassou in the Central African Republic, this time organised by Steve Blake, Boo Maisels, and Liz Williamson. Finally in 2004 a seven-week training course was run in the recently constructed Lopé Training Centre in Gabon. These courses allowed a cohort of young African biologists to go out into the field in Cameroon, Gabon, Congo, DRC, RCA and Equatorial Guinea, and collect useful data for conservation management. The current training course was built on the experiences of the previous ones, and was aimed at training potential biomonitoring team leaders and/or their assistants in a series of National parks in Gabon, Cameroon and Congo. In 2005 the course was extended to 10 weeks to allow more supervised practice in the various subjects taught.

Trainees were invited and/or selected from a pool of candidates already working as biologists or field assistants from existing WCS projects in the region. People from two projects in Cameroon, one project in Nigeria, and three projects in Gabon sent staff, and one young Masters' biology graduate from Gabon also applied and was accepted.

Nine candidates took the whole course. One place was reserved for a member of the Brigade des Eaux et Forêts (through the Conservateur), but no-one was available. The Lopé Monitoring and Training Centre Field assistants also participated in the Navigation parts of the course, including two field trips. Trainers were from WCS¹, CIRMF², UNO³ and ENEF⁴. People's education ranged from high school level up to Masters level. See Table 1 for details of trainers and trainees.

At the beginning of the course, each trainee was issued with a copy of the Conservation Methods Manual (White & Edwards, 2001) and the Vegetation Guide to Lope (White & Abernethy, 1996) . These were used for revision and for plant identification throughout the training course.

The course lasted ten weeks and covered a variety of subjects (Table 2). It was arranged in the following order:

- General scientific approach;
- Introduction to data collection and analysis;
- Practical classes on field techniques;
- Field courses;
- Wildlife and human health.

The scientific approach introduced the trainees to hypothesis testing, and experimental design, usually for the first time. General field methods included navigation, record keeping, and the need for care and rigor in observing, measuring, interpreting and reporting findings (Fig. 1). An effort was made to show trainees the practical use of basic analysis, using data that they collected themselves. The day trips allowed trainees to practice map and compass, wildlife and botanical identification (Fig. 2, 3). Subjects specific to wildlife surveys included the use and abuse of reces and transects as ways to spatially map and quantify large mammal and human sign. Safety in the forest was highlighted, and this was further emphasised by instruction in what to do when carcasses are encountered, and safe methods for collecting animal dung samples. Wildlife health issues (human-animal transfer of diseases, in both directions) included a presentation on Ebola, and clear instructions on what to do (and what not to do) when visiting the forest (Trish Reed). Presentations on elephant genetics (Mireille Bawa-Johnson) and duiker genetics (Nicola Anthony) included a practical class on collecting elephant and duiker dung.

Finally an introduction to data management, backup, and simple analysis was given, always with an emphasis on rigour and care. Although many people had some computer experience, a step-by-step introduction to computing was given, with a focus on Excel for data entry and preliminary data examination (Guy-Roger Tesse). All trainees learned how to produce maps of their field trips using ArcView.

¹ WCS: Wildlife Conservation Society.

² CIRMF: Centre International de Recherche Medicale de Franceville (Gabon).

³ University of New Orleans (USA)

⁴ Ecole Nationale des Eaux et Forêts (Gabon)

Instruction in, and practical application of, logistics of planning and implementing field trips was given (Martha Bechem and Roger Azizet).



Fig. 1. Yves Mihindou –WCS Gabon- explains note-taking to trainees at the start of a transect.



Fig. 2. Imong Inaoyom (WCS Nigeria) using a sighting compass.



Fig. 3. Queviain Makaya (WCS Gabon- Mayumba) examines animal footprints.

Two field trips were held (Fig. 4). Each time, the trip was preceded by a planning day, where participants had to (i) quantify food for the trip, as a function of person-days; (ii) buy and pack the food and equipment for safe and waterproof travel; (iii) plan the itinerary for the trip, including identifying lat-long coordinates as destination points for the start of transects; (iv) establish tasks to be done and assign tasks to different team members. Only one person had not been in true forest before, all the others had worked as part of a professional team in the field. Each trip had five trainees from outside Lope, one or two trainees from the Lope monitoring field assistant team, and one or two trainers.

During each trip, the day's GPS tracklog was downloaded to a small portable computer (HP palmtop) and the data was typed in during the evening. The data was saved to a compact flashcard, ready for analysis in the training centre at the end of each trip (Fig. 5).

At the end of the trip, each team transferred their data from the flashcard to a computer at the Training Centre, put their itinerary on a map (all the tracklogs are shown together on Fig. 6), and calculated encounter rate on recces and transects. These were then displayed graphically as histograms. The trainees thus put into practice what they had learned in the lecture series.



Fig. 4. Team “B” at the entrance of the forest after the end of a field trip. L to R: Jean Jaques Tanga (Conservateur, Parc National de Birougou, Gabon; Ange Bolende (Field assistant, WCS Lope); Jodel Sanguie (Field assistant, WCS Lope); Hyacinth Mboh (WCS Cameroon); Quevain Makaya (WCS Gabon); Front row: Barde (Field assistant, WCS Lope); Edgar Ambassa (WCS Cameroon).

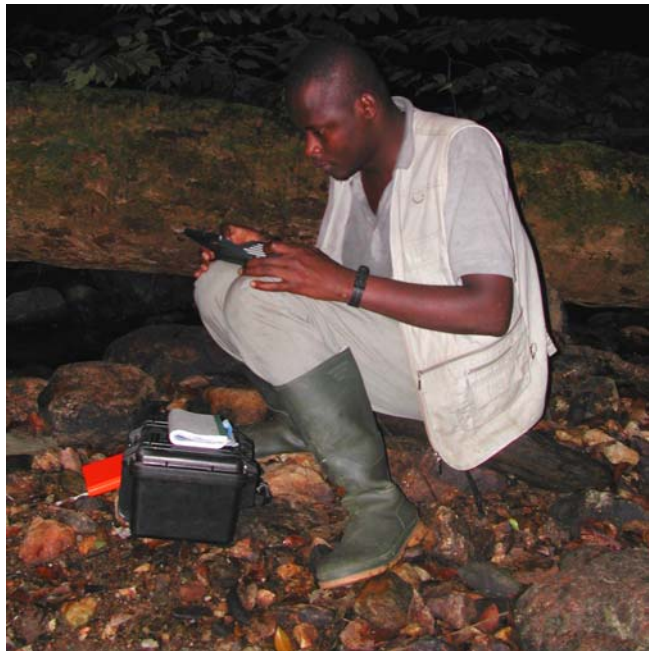


Fig. 5. Hyacinth Mboh (WCS Cameroon- Takamanda) and Ruffin Ambahe (WCS Cameroon- Mbam et Djerem) typing in the days' data in the evening at camp.

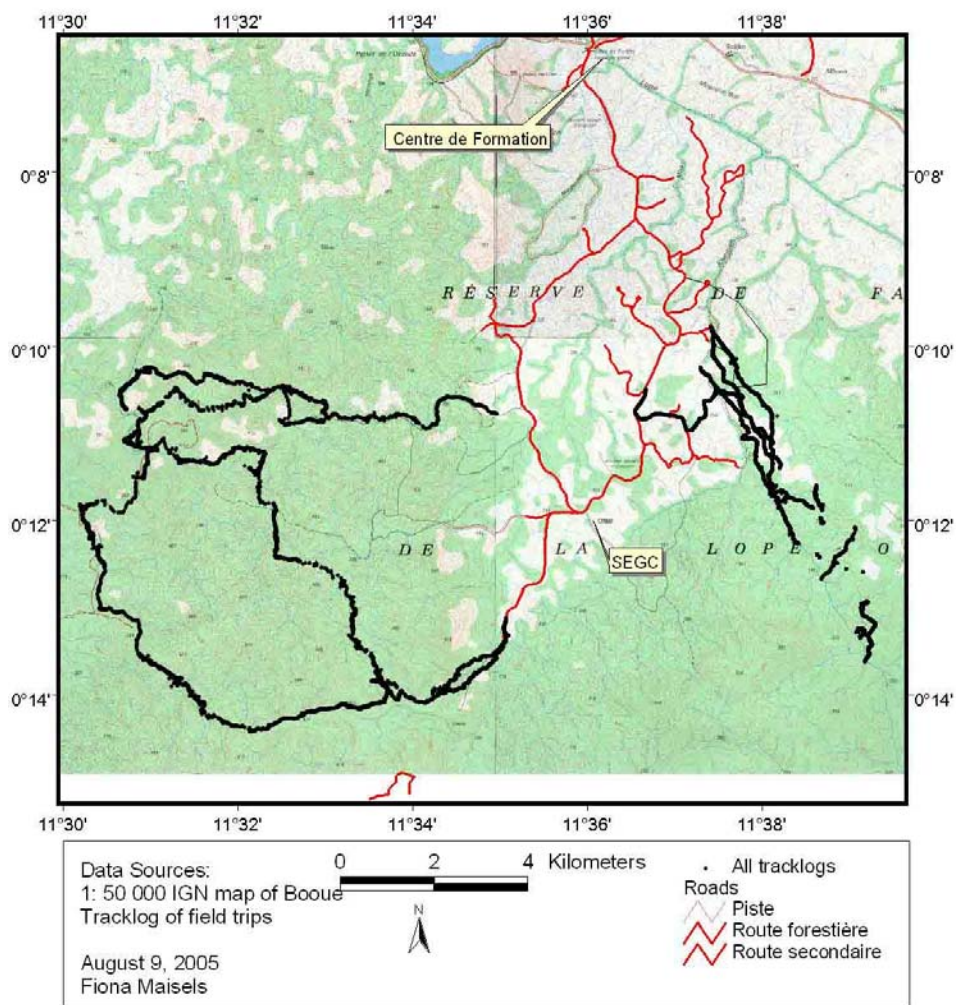


Fig. 6. Tracklogs (black dots) of all four field trips into the forest around the SEGC study area..

These field trips served two purposes. One was to allow trainees to experience real field conditions (which included some insects, a little rain, some elephant, buffalo and gorilla encounters, and medium physical effort), and to put into practise what they had learned in the classroom and on the earlier days in the field. The second purpose was that these trips allowed the trainers to evaluate each person's field and teamwork skills. Most people were very willing to be real team workers, showing initiative and helping their colleagues. This year there was an excellent group atmosphere, with all trainees helping each other in practical and data analysis.

At the end of the training course each trainee was issued with a CD-Rom which contained various useful documents such as the teaching notes, several manuals for handling GPS, palmtop, etc ; the data they had collected in the field, maps and photographs of their missions, and the software for downloading GPS points, and all the trainees own trip reports.

The final exam revealed the theoretical strengths and weaknesses of different participants, and also a test of map and compass showed who was best at finding lat-long points from a map and also who could calculate distances and direction to take between sets of two points.

As a result of the performance of each person during the training course, and also as a result of their educational level, individual evaluations will be sent to their project managers. The person with no previous field experience will be sent for further evaluation and experience in Lope Monitoring team.

References

White, L.J.T. & Abernethy, K.A. (1996) Guide de la végétation de la Réserve de la Lopé, Gabon. Ecofac-Gabon, Libreville. (Both English & French versions)

White, L. & Edwards, A. (2001) Conservation en forêt pluviale africaine: Methodes de recherche, 1st edn., Libreville. (Both English & French versions)

Acknowledgements

- The Government of Gabon : CNPN, Ministère des Eaux et Forêts ;
- Parc National de la Lopé : Conservateur Mr. Joseph Ngowou ;
- Trainers: Martha Bechem, Kath Jeffery, Roger Azizet, Olly Hymas, Yves Mihindou, Guy-Roger Tesse, Trish Reed and Mireille Bawa-Johnson; Nicola Anthony; Alex Mercier
- WCS Lope Admin & Research: Kath Jeffery, Julian Easton, Nerissa Chao
- WCS Libreville: Lee White, Bryan Curran, Linda Percy, Annie Maroga, Olga, Richard Oslisly
- Lope Research assistants: Edmond Dimoto, Jean-Toussaint Dikangadissi, Lin Jerome Moukala, Jodel Zondo, Martial Bouassa, Salvador Bivigou, Ange Bolende.
- Training Centre support: Jules Penze, Georgette Pindo, Rosine Mandonda, Chantal Mbata, Samba Ndiaye, and all WCS Lope staff.

Table 1. Participants, Lope Conservation Field Methods course, 2005.

Status	Affiliation	Name	Time spent
Trainer- science, field methods	WCS -C. African area- Monitoring	Boo Maisels	10 weeks- organiser & teacher
Trainer- science	WCS Gabon- Lope Training Centre Director	Kath Jeffery	10 weeks- logistics and teacher
Trainer- field methods and logistics	WCS -Lope monitoring team leader	Martha Bechem	8 weeks- teacher & interpreter
Trainer- navigation and logistics	ENEF- Training staff	Roger Azizet	1 week- trainer
Trainer- computer skills	WCS Gabon- IT advisor	Guy-Roger Tesse	2 weeks- trainer
Trainer- Bushmeat issues	WCS Gabon- Bushmeat program ccordinator	Olly Hymas	1 day- trainer
Trainer- ape dung sampling ; wildlife/ human health issues	WCS -Field Vet program	Patricia Reed	2 days- trainer
Trainer- elephant genetics, elephant dung sampling	CIRMF PhD student	Mireille Johnson- Bawe	2 days- trainer
Trainer- duiker genetics- duiker dung sampling	University of New orleans/ CIRMF	Nicola Anthony	2 days- trainer
Trainer- navigation	Student BTS- LEGTA Aix Valabre	Alec Mercier	1 week-2 days- trainer
WCS trainee/ trainer (staff at Lope)	WCS Gabon Lope- monitoring assistant	Yves Mihindou	10 weeks- trainer- trainee
CNPN trainee	CNPN Gabon- Conservateur Birougou	Jean Jaques Tanga	10 weeks - trainee 10 weeks – trainee
WCS trainee	WCS Gabon/ Projet Iguela- field staff	Stephan Lamou	10 weeks – trainee
WCS trainee	WCS Cameroun- Mbam et Djerem- field staff	Ruffin Ambahe	10 weeks – trainee
WCS trainee	WCS Cameroun- Takamanda-research staff	Albert Ekinde	10 weeks – trainee
WCS trainee	WCS Nigeria- research staff	Imong Inayoyom	10 weeks – trainee
WCS trainee	WCS Cameroun- Mbam et Djerem- field staff	Edgar Ambassa	10 weeks – trainee
WCS trainee	WCS Cameroun- Takamanda- research staff	Hyacinth Mboh	10 weeks – trainee
WCS trainee	WCS Gabon- Mayumba- field staff	Quevain Mackaya	10 weeks – trainee
Trainee		Gildas Yola	10 weeks - trainee

