

FINAL PROJECT REPORT

Enhancing capacity for learning bird ringing skills through research and conservation

January 2005 - March 2006

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Dedication

This final project report is a special dedication to the late Master Brian Wamiti, Our beloved son, who was born on June 7th and passed away on 10th June 2005 during the time of this project, May God rest his soul in Eternal Peace.

Amen.

Executive Summary

This project aimed at providing an opportunity for training in the basics and fundamentals of bird ringing while assisting in research and conservation through collection of ornithological and environmental data at various sites in Kenya being a continuation of the 2001/02 project. During the 15 months (January 2005 until March 2006) project period, a total 1,071 birds from 79 species were handled including both new and old captures. This was out of 61 sessions held at four ringing sites: Botanic Gardens at National Museums of Kenya, A Rocha Kenya's site in Karen, Wildlife Clubs of Kenya at Langata, Nairobi and the School for Field Studies in Kitengela as well as birds brought to the office. The Botanic Gardens had 44 sessions and recorded a total of 642 individuals of 51 species. These figures however excludes activities that took place at Mwamba Field Study Centre, Taita Hills Forests and Ngulia where additional training and exposure occurred. It unlocked training opportunities for 22 Department of Ornithology's staff - research scientists, research interns and affiliates; 9 Departmental volunteers; and 12 University and College students on field attachment.

This project enabled capture of some key species of conservation important and/or useful records

e.g. Olive Sunbird, Green Twinspot, White-headed Barbet, Lemon Dove, Black-throated Wattle-eye and African Goshawk A Rocha Kenya's site in Nairobi; the globally-threatened Taita White-eye and Taita Thrush in Taita Hills; the globally-threatened Spotted Ground Thrush at Gede Ruins and East Coast Akalat at the coast as well two Singing Cisticolas each of about 10 years old Botanic Gardens. This list is also enriched with a good number of Palearctic migrants.

Ringing at A Rocha Kenya's site enabled the production of a National Museums of Kenya Centre for Biodiversity's research report not to mention her contribution to the overall goals of the Museum. We were also a host to local and international students, distinguished guest e.g. from the British Trust of Ornithology, and more so to Josh Cole, Rufford Small Grants Manager.

Despite the several problems encountered, majority of the objectives was achieved. Looking into the future, I hope to continue training interested ringers in Kenya and mostly those at the grassroots level where such skills would contribute to socio-economic growth as bird guides and/or research assistants.

Project objectives (revised)

The project's broad objectives was involve participants in robust field projects to learn new bird ringing skills, collect scientific data and share their skills with others practically.

The Specific objectives were:

1. Expand activities initiated during 2001/02 project and start on new ones to enhance expertise in field ornithology.
2. Enable members contribute to the understanding of Kenya's avifauna.
3. Carry out pilot studies on the effects of forest fragmentation on bird communities in an urban forest.
4. Allow inexperienced members acquire skills, and those exposed improve on their areas of weaknesses.
5. Assess the needs required for production of a comprehensive training manual applicable locally.

Introduction

This was a continuation of 2001/02 project (*improving capacity for professional field ornithology skills in Kenya*). The current project lasted for 15 months starting January 2005 until March 2006. There were a total of 61 sessions (Fig. 1) excluding those held at Mwamba Field Study Centre at Watamu, Ngulia Safari Lodge and Taita Hills Forests where members participated in ringing sessions. However, ringing totals for Taita Hills and one of the Mwamba trips are reported elsewhere in this report while a hard copy report for Ngulia is enclosed as part of the report. Although we were able to have ringing sessions in each of the project

months, this did not happen in December because of logistical and human resources commitment to other Departmental research projects. It unlocked training opportunities for 22 Department of Ornithology's staff including research scientists, research interns and affiliates; 9 Departmental volunteers; and 12 University and College students on field attachment. A summary of participants in each category are given in figure 2 below.

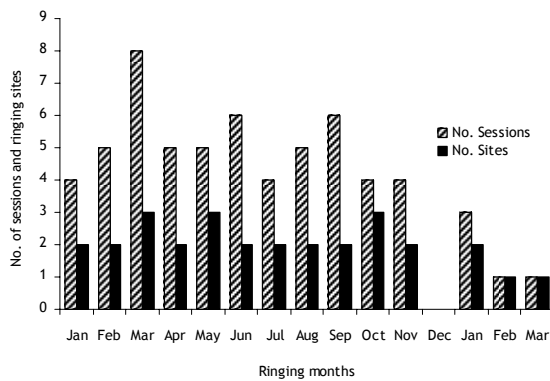


Fig. 1: Ringing sites and total number of ringing sessions at each site.

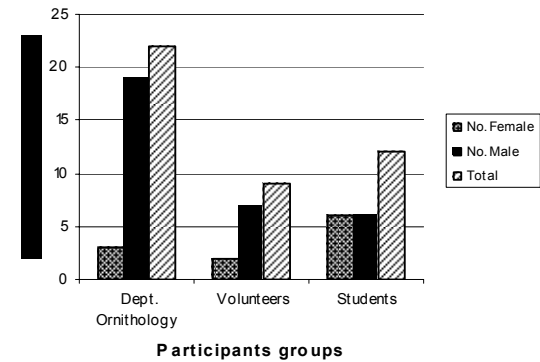


Fig. 2: Details of each of the project participant's categories and gender composition.



Fig. 3: A session at Moi University's Field Station at south bank of Sabaki River Mouth, north of Malindi, Kenya. (Nairobi Ringing Group's Training of Trainers course at Mwamba, Feb 2005). © H. Ndithia.

2. Ringing Sites and Totals' Summary

Background

This project too enabled handling a total of 1,071 individuals of 79 species. There were 791 new captures and 285 recaptures. This was out of 61 sessions held at four ringing sites and some few birds brought to the office from aviaries or accidental captures. For both new and recaptured individuals, these sites had the following totls:

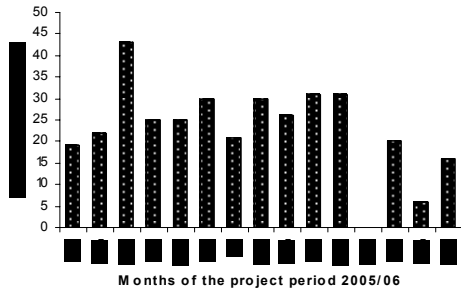


Fig. 4: Number of species ringed in each project month.

National Museums of Kenya Botanic Gardens (642), A Rocha Kenya Site, Karen (399), School for Field Studies (24), Wildlife Clubs of Kenya (6) and birds ringed in the office (5). Below are figures illustrating the ringing totals.

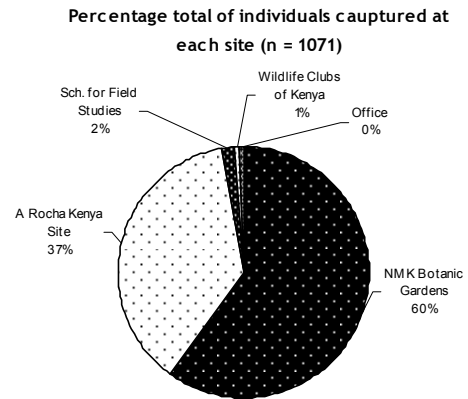


Fig. 5: Total No. of individuals (new & recaptures) at each site.

2a). Botanic Gardens, National Museums of Kenya

Most of ringing and training took place at the Botanic Gardens of the National Museums of Kenya **in Nairobi** with a total 44 sessions (72%). The site's ringing totals comprised 60% (642 individuals) of total catch (see figure 4 above) with 51 species. The top-ten species with the highest number of new individuals are shown in figure 5 below. These were as follows: Baglafecht Weaver *Ploceus baglafecht* (101), Red-billed Fire-finch *Lagonosticta senegala* (58), Black-headed Weaver

Ploceus cucullatus (37), Streaky Seedeater *Serinus striolatus* (32), Olive Thrush *Turdus olivaceous* (24), Speckled Mousebird *Colius striatus* (23), Common Bulbul *Pycnonotus barbatus* (17), African Paradise Flycatcher *Terpsiphone viridis* (16), Grosbeak Weaver *Amblyospiza albifrons* (14), Cinnamon-chested Bee-eater *Merops aerobates* (13), Rufous Sparrow *Passer motitensis* (12) and Holub's Golden Weaver *Ploceus xanthops* (11).

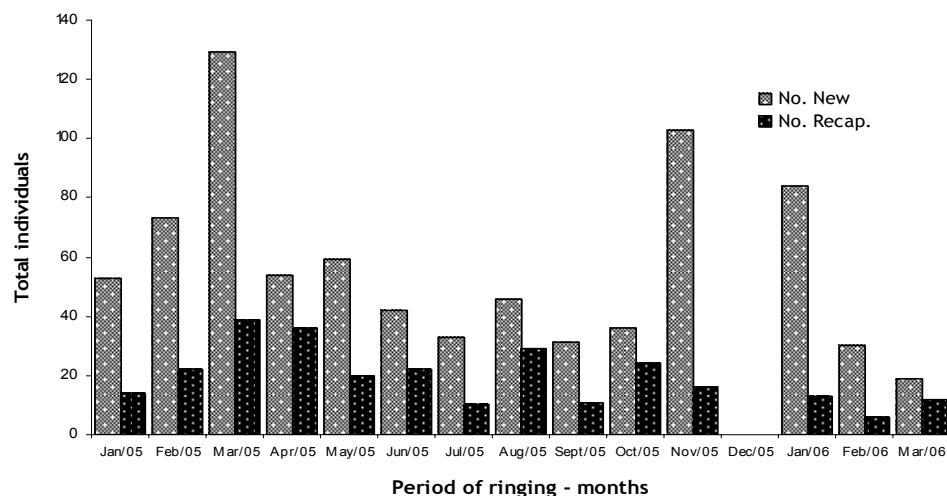


Fig. 6: Number of new and recaptured birds in each month Jan'05 to Mar'06

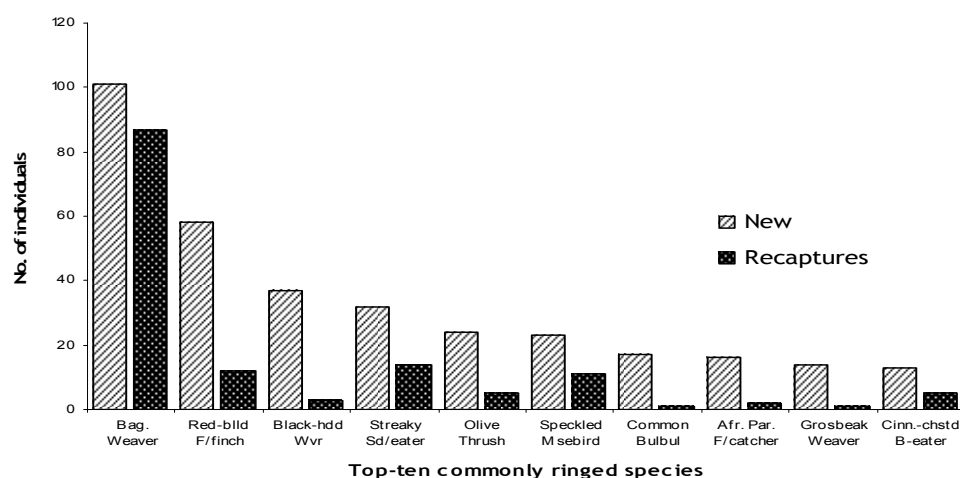


Fig. 7: Graph showing top-ten species with highest number of individuals caught during the project period at the Botanic Gardens, Nairobi Museum.

Baglafecht Weaver was the commonly caught species at Nairobi Botanic Gardens. This high capture rates invited a profound discussion. A total of 188 individuals were caught among them 101 new and 87 recaptures. Their total number constituted 17.5% of total birds handled during the project period. However, of great interest was their seasonal trend that had two peaks: high peak (Feb-April) and low peak (Aug-Oct). Although this data may require comparison between different years, the trend depicts that this species

has a seasonal movement pattern with the numbers going to almost zero in June and July despite the high number of ringing sessions compared to other months. This species is there a suitable one to study the seasonal patterns of bird species in Nairobi especially at the Botanic gardens where over ten years data exists with a big number of recaptures. Such a study too would try to find out **where the population goes in June and July**. Figure 8 below illustrates this further.

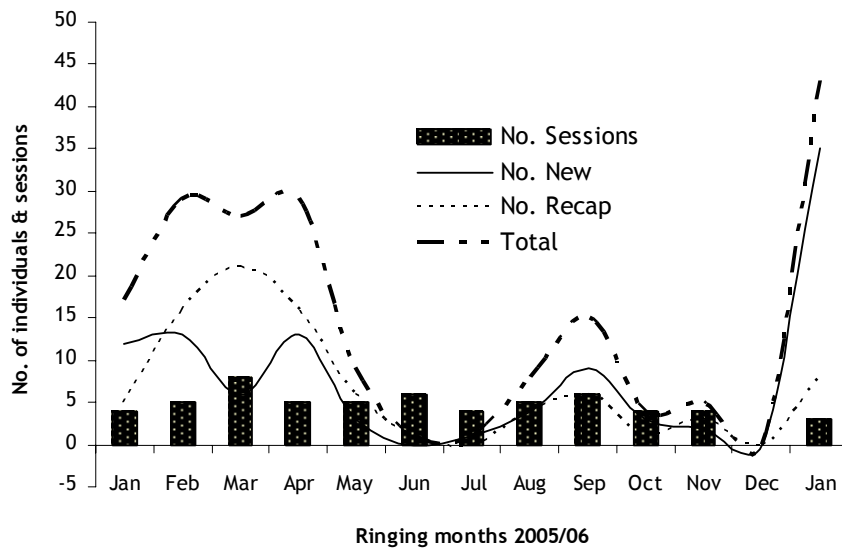


Fig. 8: Monthly distribution of Baglafecht Weaver at Botanic Gardens, Nairobi Museum from Jan 2005 - Jan 2006.

2b). A Rocha Kenya's site in Karen, Nairobi

The A Rocha Kenya's site in Karen in the suburbs of Nairobi City was treated as a Constant Effort Site (CES) where ringing was done once every month on the second weekend (Friday and Saturday) of the month. The site is a dry highland urban forest which is part of the large Ololua Forest Reserve in Nairobi (see Ndithia *et al* 2005 for more details). The objectives of our study here were:

1. Establish a constant effort site to enable a study this urban forest's bird communities now and in the future.
2. Training in fundamentals of bird ringing and data collection.
3. Expose participants to camping as a field activity.
4. Introduce University students on attachment in methods of ringing data collection including discussions on application of this data.

At this site, we conducted 14 sessions during the 15 month project period. A total 309 new birds of 52 species were caught of which only 90 individuals were recaptured. We did not catch birds marked elsewhere nor did we have our birds reported by other ringers. The site has an easy accessibility by public means of transport that made it easy for transporting both ringers and equipment work well. See figure 9 for details.

The first session was held on the 19th January 2005 and run through November winding up in March 2006. The site offered a variety of forest-dependent species not caught at the Botanic Gardens at the National Museums of Kenya and included both local and Palearctic migrant species. Examples of some local species include: African Goshawk, Black Cuckoo Shrike, Black-throated Wattle-eye, Cabanis's Greenbul, Green-backed Twinspot, Lemon Dove, Olive Sunbird, Tropical Boubou, White-starred Robin, White-headed Barbet and Yellow-whiskered Greenbul. The **Olive Sunbird** was an interesting species because not many of them has been caught or sighted in Nairobi area.

The following were the mostly caught species each with over ten individuals (new captures only): Common Bulbul (46), Yellow-whiskered Greenbul (41), Collared Sunbird (17), White-starred Robin (17), Variable Sunbird (15), Grey-backed Camaroptera (15), Cabanis's Greenbul (15), Ruppell's Robin-Chat (14), Streaky Seedeater (13) and Montane White-eye (11). This is illustrated in figure 10 below.

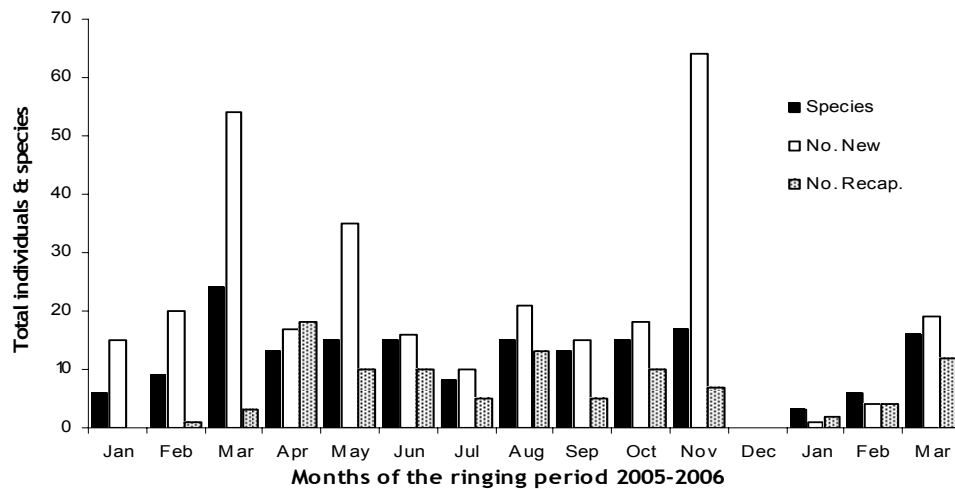


Fig. 9: Comparison of number of species, new and recaptured individuals at A Rocha Kenya's site in Karen, Nairobi.

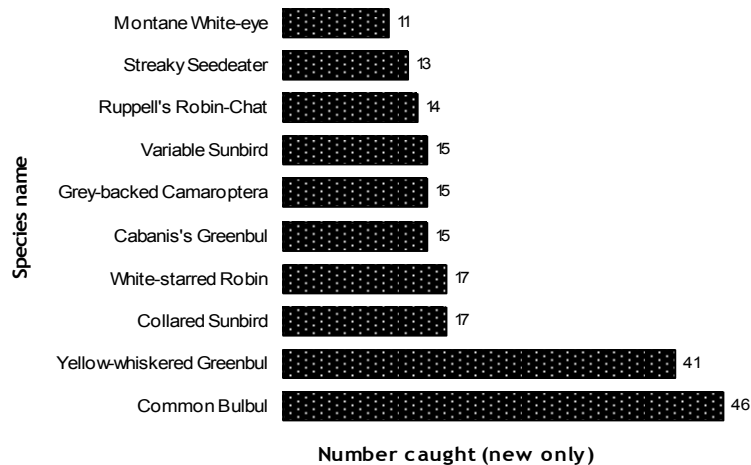


Fig. 10: Ten commonly caught species at A Rocha Kenya's site in Karen, Nairobi.

The A Rocha Kenya site has proved to be a good one for a ringing training and urban forest birds study being in an area where many environmental, economical, demographic and general infrastructural development changes are rapidly taking place. Though a small site (c.14 acres), it

depends on the neighborhood for her avifauna diversity and forest structure continuity.

A checklist of all species ringed, observed or heard during the study period is shown in appendix 3. There were a total of 68 species from 24 families.

2c). Wildlife Clubs of Kenya, Langata, Nairobi

In late May, we received an invitation to demonstrate bird ringing and deliver a lecture on birds' research and conservation in Kenya at the Wildlife Clubs of Kenya's Centre for Tourism Training and Research in Langata, Nairobi. The objectives of this trip were to a) demonstrate the science and art of bird ringing through a practical and a lecture and b) to trap birds ringed in 2002 at the same site in 2002 or ringed elsewhere. The two day vent was attended by about 200 students and 4

staff members. A total of six birds were captured including a Grey-backed Camaroptera first ringed in 2002. The site has an intact forest patch connecting to a larger forest that may allow huge movements of birds in the area. With such demonstrations, we hope to stimulate and develop interest in a birds' research and conservation career to the students. It's also a nourishing experience for their teachers who have to meet different students over the years. Once again, the WCK

Administration demonstrated their wish to have the exercise included as an annual activity in the Centre's curriculum although this seems to be

hampered by finances. Table 1 below shows the number of each species caught during the session.

Table 1: Birds captured at Wildlife Clubs of Kenya

Species Common Name	No New	No Recap.	Total
Grey-backed Camaroptera	1	1	2
Red-billed Firefinch	1	0	1
Yellow-whiskered Greenbul	1	0	1
Tawny-flanked Prinia	1	0	1
Variable Sunbird	1	0	1
Totals	5	1	6

2d). School for Field Studies (SfS), Kitengela

As is the tradition since the early 1990's, the Center for Wildlife Management (also called School for Field Studies) extended their invitation to Nairobi Ringing Group to carry out a ringing demonstration to their USA-based college students who attend the Center's summer field season credit courses in Kenya. This happened on March 26 and October 3rd, 2005. We have always found this as a wonderful opportunity to intermingle with students whom we encourage to take up bird ringing and ornithology as an important tool in ecological research when they go back to their country. Some of them have written back to us telling us how

important meeting was as it made them develop interest in birds and bird ringing. The school has relocated from their former site in Athi-River to Kitengela in the southern part of Nairobi National Park.

Our trip normally starts on a Friday evening when we set up nets for the following. A lecture and an introductory session follow after dinner. This lecture is focused on conservation of birds in Kenya and the activities of Nairobi Ringing Group including reasons for bird ringing and its contribution to science and conservation.

Table 2: List and number of species caught in each trip at SfS, Kitengela.

Date 2005	Species Common Name	No. New	No. Retrap	Total
March 26	1 Winding Cisticola	1	1	2
	2 Singing Cisticola	3	0	3
	3 Spotted Morning Thrush	1	0	1
	4 African Paradise Flycatcher	0	1	1
	5 Grey-backed Camaroptera	3	2	5
	6 Slate-coloured Boubou	1	0	1
	7 Purple Grenadier	2	0	2
	8 Eurasian Reed Warbler	1	0	1
October 3	9 Grey-backed Camaroptera	0	2	2
	10 Rattling Cisticola	2	1	3
	11 Tropical Boubou	0	1	1
	12 White-browed Scrub Robin	1	0	1
	13 African Moustached Warbler	1	0	1
Total		16	8	24

2e). Ringing in the Office

Due to the increasing number of people interested in birds as a hobby or their studies, the Department of Ornithology is becoming popular as a centre for ornithological references. Due to this, we have received invitations from people running aviaries or just providing care to injured birds and would like to have them ringed before release back to the wild. There are also birds that are accidentally caught up in buildings or people do not want them live in their

buildings. The Nairobi Ringing Group is therefore adding a new category of ringing totals in addition to sites. These are birds ringed in the office. See table 3 below for details on number of species and individuals ringed from different parts. The single recapture, earlier ringed at Botanic Gardens (NMK), was reported from University of Nairobi (UoN).

Table 3: Birds brought and ringed at DoO's Office from different locations

	Where ringed	Date 2005	Species Common Name	No. New	No. Recap.	Total
1	NMK	8 th Feb	Hadada Ibis	1	0	1
2	NMK	12 th Feb	House Sparrow	1	0	1
3	UoN	1 st Apr	African Paradise Flycatcher	0	1	1
4	Runda	7 th Apr	Common Bulbul	1	0	1
5	NMK	6 th Sept	House Sparrow	1	0	1
Totals				4	1	5

1. Training at A Rocha Kenya's Mwamba Field Study Center & Bird Observatory in Watamu, Kenya.

Introduction

Mwamba Field Study Centre & Bird Observatory, a property of A Rocha Kenya, has always been a pristine place for Nairobi Ringing Group's training needs. Due to her strategic location i.e. in being close to different habitat types (marine, freshwater and terrestrial) hence a high species diversity, it has always been a key place that has continued to

provide a training opportunity to enthusiastic ringers both amateurs and professionals. During this project, I organized for four trips in February, June, October and November. Below are brief notes on each trip showing objectives and participants. A detailed report is provided for the June trip as an example of participant's insight and experience.

2a) Training of Trainers Course: 20th – 26th February 2005

Report by Wanyoike Wamiti

It was deemed as important to kick-off the project activities by sending a team of already well-trained members to Nairobi Ringing Group's founder, Colin Jackson, and Director, A Rocha Kenya at Mwamba Field Study Center & Bird Observatory. This was branded "Training of Trainers" course. The specific objective of this training was to offer an opportunity for the participants to polish up their ringing skills while they acquire skills and knowledge that would make them effective and resourceful communicators in transferring and

sharing their ringing skills with other colleagues during training sessions during the project period.

The team comprised of five competent ringers each with over five years of ringing training and experience. These were: **Chege Kariuki, Bernard Amakobe, Henry Ndithia, John Musina** and **Wanyoike Wamiti**. We had a very wonderful five-day training that exposed us to different species: forest, shorebirds and bush/scrub. The various ages and sex and migration status gave us such a challenging time as we fine-tuned our basics.

2b) Mwamba 2nd Training: 21st - 26th June 2005

The following people participated in this training: Philista Malawi, Patricia Thiong'o, Martha Nzisa, Timothy Mwinami and Lawrence Wagura.

The objectives of this course were:

- Allow participants to identify their areas of weakness in bird ringing and use the opportunity at Mwamba to improve.

- Undergo an intensive training in fundamentals of bird ringing.
- Expose them to coastal Kenya species that are not handled or sighted in Nairobi.
- Participate in the ongoing bird monitoring program at A Rocha Kenya's Mwamba centre.

2c) Mwamba 3rd Training: 3rd – 7th October 2005.

The participants in this trip were: Martin **Mwema**, **Maurice Mugode** and **Dominic Kamau**. Although the three had a different length of bird ringing experience and exposure, their expectations can be summarized as follows:

Waders ringing.

1. Polish skills in – setting and bringing down nets individually and as a group, accuracy in biometrics, scoring molt, general handling including and not limited to:

extraction, ageing/sexing, and keeping records.

2. Familiarize with coastal bird species and their identification particularly waders.
3. An opportunity to explore the neighboring Important Bird Areas of Mida Creek, Arabuko-Sokoke Forest, Gede ruins and Malindi-Watamu Marine National Park with an objective of assessing their general conservation for reporting to the National Coordinator of the IBA program.

4. Acquire skills in professional handling and repair of ringing equipment especially mist nets.
5. Simple techniques of analysis ringing data.

Below is a field report that was compiled by the team as testimony of their experience at Mwamba.

“It was another great chance for three members of the Nairobi Ringing Group to attend a five-day training session at A Rocha Kenya's Mwamba Field Study Center & Bird Observatory in Watamu from 3rd to 7th October 2005. This was the third trip under the Rufford Small Grants training program. We arrived in Watamu on the dawn of that Monday after traveling all night from Nairobi. During the trip, we undertook training at three sites namely Mwamba nature trail, Mwamba beach and Gede ruins forest. We also visited the Mida creek mud flats and Sabaki river mouth for bird watching.

On that morning, we met the center's Director, Mr. Collin Jackson, in order to plan for the week's events. As our trainer, he also wanted to gauge our level of expertise and to get to know our expectations at the end of the training. We were then oriented and we spent the rest of the morning taking a nap and settling in. In the afternoon, we started with the basics of choosing net rides; setting up mist-nets, knot making and net furling & unfurling.

On Tuesday morning, we began our ringing training learning the essentials of bird ringing and value of biometrics. The birds captured on this day included Lesser Masked Weaver, Emerald-spotted Wood Dove, Red-capped Robin-Chat, Red-fronted Tinkerbird, Tambourine Dove, Grosbeak Weaver, Olive Sunbird, Northern Brownbul and African Paradise Flycatcher. In the afternoon, we worked on ringing schedules, which is an important part of a ringer's training for data management and entry.

On Wednesday, we had an early-morning session for ringing of Palearctic waders. This was one of the most interesting sessions. We began setting up of wader nets as early as 3:00 am on the beach at high tide that would occur later at 5:00 a.m. this early morning session brought three species of waders: Terek Sandpiper as well as Greater and Lesser Sandpipers. Our team had no experience in wader handling and ageing, it was therefore a valuable experience. Ageing of Palearctic waders is done by assigning numbers to age-groups such as Pullus (1); Unknown/no idea (2); not born in current/calendar year (3); not hatched current calendar year nor last year (4); hatched last year (5); and did not hatch last year and present year

(6). These stages are each characterized by different moult patterns on which ageing is based.

In the afternoon, we traveled to Gede ruins to set up nets for Thursday's ringing session. This ruin encompass remains of a coastal dry forest, protected and managed by the National Museums of Kenya and has been designated as one of Kenya's sixty Important Bird Areas. It is also a tourist attraction for those interested in viewing old Arabic settlement ruins of the 14th century.

Then came the much waited Thursday morning at Gede. There was a variety of coastal species including Mangrove Kingfisher, Eastern Bearded Scrub Robin, African Paradise Flycatcher, Narina Trogon, Spotted Ground Thrush, Tambourine Dove, Red-capped Robin-Chat and Olive Sunbird. Among them, the Red-capped Robin-Chat was the most common bird in this forest although they are intra-African migrants from Southern Africa. The highlight of the day was the capture and ringing of the globally threatened Spotted Ground Thrush *Zoothera guttata*.

In the afternoon, we left for Mida Creek mudflats for a wader's watch. It was an interesting adventure where we gained a lot of experience in identifying them. Some of the species we saw were; Eurasian Curlew, Whimbrel, Sacred Ibis, Grey Plover, Yellow-billed Stork, Terek Sandpiper, Gull-billed Tern, Ringed Plover, Lesser and Greater Sandpipers, African Fish Eagle and Common Greenshank among others.

Then came Friday when we went back to Gede ruins where we caught and ringed the Narina Trogon, Eastern Bearded Scrub Robin and Red-capped Robin-chat to mention just but a few. In the afternoon, we headed for the famous Sabaki River Mouth to lend a hand in counting terns and also to familiarize ourselves with more coastal waterbirds. We recorded among others, African Skimmer, Common Pratincole, Lesser and Greater Flamingo, Pink-backed Pelican, Heuglin's Gull, Gull-billed Tern, Caspian Tern, Common Tern, Saunder's Tern, Curlew Sandpiper and Ruddy Turnstone. This visit to Sabaki wound our training session. Later in the day, we had a brief interview from the A Rocha International journalists/filmmakers as part of the training's evaluation.

In a few words, we learnt the following:

- Basics of setting up mist-nets, choosing net rides, care of nets, guy ropes knot making, and opening, furling & unfurling nets.
- Extraction.

- Identification and ageing skills for coastal species using plumage, condition of feathers and molt.
- Scoring of moult.
- Accuracy in measurements: head, wing, tail, tarsus and weight.
- The proper method of placing rings, ring extraction and ring butting.
- Recording biometrics in the ringing book i.e. scribing.
- Completing schedules”.

Table 4: Species ringed during Mwamba 2nd training trip (4-7th October 2005)

	Species	Site Ringed	Total
1	Tambourine Dove	Gede & Mwamba Nature Trail	3
2	Red-capped Robin-Chat	Gede Ruins Forest	14
3	Narina Trogon	Gede Ruins Forest	2
4	Eastern Bearded Scrub Robin	Gede Ruins Forest	4
5	Olive Sunbird	Gede Ruins Forest & Mwamba Nature Trail	5
6	Mangrove Kingfisher	Gede Ruins Forest	1
7	Spotted Ground Thrush	Gede Ruins Forest	2
8	African Paradise Flycatcher	Gede Ruins Forest	1
9	Greater Sandplover	Mwamba Beach	8
10	Lesser Sandplovers	Mwamba Beach	2
11	Terek Sandpiper	Mwamba Beach	1
12	Mangrove Kingfisher	Gede Ruins Forest	1
13	Red-fronted Tinkerbird	Gede Ruins Forest	1
14	Scaly-throated Honeyguide	Mwamba Nature Trail	1
15	Emerald-spotted Wood Dove	Gede Ruins Forest	1
16	Lesser Masked Weaver	Mwamba Nature Trail	4
17	Common Bulbul	Mwamba Nature Trail	1
18	Northern Brownbul	Mwamba Nature Trail	1
19	African Pygmy Kingfisher	Mwamba Nature Trail	3
20	Grosbeak Weaver	Mwamba Nature Trail	1
		Total	57

2d) Mwamba 4th Training: November 2005

This trip focused on trapping and ringing of shorebirds at Sabaki River Mouth, one of Kenya's sixty Important Bird Areas famous for congregations of waterfowl both freshwater, estuarine and seabirds. The mixing of freshwater and seawater creates a diversity of habitats that attracts this huge numbers of birds. This ringing

was one of Mwamba's annual activities. Two members of Nairobi Ringing Group, Maurice Mugode and Maurice Ogoma took part. In addition to learning, the team also had an opportunity to be interviewed for a video production courtesy of Mwamba. publicity.



Figure 11: Nairobi Ringing Group Members: Mogode and Ogoma LR) during shorebirds training at Sabaki. Photo credit Mwamba FSC & BO.

3. Field Excursion to Nganga Forest, Taita Hills in Coast Province.

25 – 30 August 2005

Wanyoike Wamiti, Mwangi Wambugu & Erique de Montana

Introduction

Taita Hills Forests are one of Kenya's, and in deed worlds, most critically endangered and biologically important habitats. They are part of the Eastern Arc Mountains of Kenya, Tanzania and Malawi. They exist as forest fragments of varying sizes sheltering three endemic and

globally threatened bird taxa (Taita Apalis, Taita White-eye and Taita Thrush) and many other scarce and distinctive flora and fauna. Unfortunately, despite their ecological importance, the forest faces many threats e.g. logging and replacement of native vegetation.

Trip Objectives:

1. Participate in the on-going ornithological research projects on frugivory and effects of fragmentation on selected forest bird species.
2. Meet, train and ring with members of the local community participating in these on-going projects and bird ringing training programme.
3. Expose participants to the montane conditions, weather and avifauna species of Taita Hills as compared to Nairobi thus offering a training opportunity in a different environment.
4. A chance to capture and ring the three endemic and globally threatened bird species of Taita Hills Forests.
5. Help participants assess the possibilities and conditions for a future study on various conservation aspects.

Results

Table 5: Summary of daily capture showing number of species (new and recaptured individuals) caught each day.

The forest category classification follows Bennun *et al* (1996) classification of the forest birds of Kenya and Uganda.

Day I: 26-Aug-05

Species Common Name	Scientific Name	Forest Category	No. New	No. Recap	Total
Yellow-throated Woodland Warbler	<i>Phylloscopus ruficapillus</i>	F	5	2	7
Olive Sunbird	<i>Nectarinia olivacea</i>	FF	10	4	14
Stripe-cheeked Greenbul	<i>Andropadus milanjensis</i>	FF	5	1	6
White-starred Robin	<i>Pogonocichla stellata</i>	F	1	2	3
Taita White-eye	<i>Zosterops poliogaster</i>	F	11	1	12
Taita Thrush	<i>Turdus olivaceous helleri</i>	FF	0	1	1
Eastern-double Collared Sunbird	<i>Nectarinia mediocris</i>	F	1	0	1
		Totals	33	11	44

Day II: 27-Aug-05

Taita White-eye	<i>Zosterops poliogaster</i>	F	2	0	2
White-starred Robin	<i>Pogonocichla stellata</i>	F	5	5	10
Stripe-cheeked Greenbul	<i>Andropadus milanjensis</i>	FF	5	1	6

Table 5 cont'd

Species Common Name	Scientific Name	Forest Category	No. New	No. Recap	Total
Yellow-throated Woodland Warbler	<i>Phylloscopus ruficapillus</i>	F	2	0	2
Olive Sunbird	<i>Nectarinia olivacea</i>	FF	3	0	3
Evergreen Forest Warbler	<i>Bradypterus lopezi</i>	FF	1	0	1
Totals			18	6	24
Day III: 28-Aug-05					
White-starred Robin	<i>Pogonocichla stellata</i>	F	5	4	9
Stripe-cheeked Greenbul	<i>Andropadus milanjensis</i>	FF	2	0	2
Olive Sunbird	<i>Nectarinia olivacea</i>	FF	5	1	6
Tambourine Dove	<i>Turtur tympanistria</i>	F	1	0	1
Eastern-double Collared Sunbird	<i>Nectarinia mediocris</i>	F	2	0	2
Lemon Dove	<i>Aplopelia larvata</i>	FF	2	0	2
Totals			17	5	22
Day IV: 29-Aug-05					
White-starred Robin	<i>Pogonocichla stellata</i>	F	1	1	2
Stripe-cheeked Greenbul	<i>Andropadus milanjensis</i>	FF	0	3	3
Olive Sunbird	<i>Nectarinia olivacea</i>	FF	1	0	1
Totals			2	4	6

Table 6: Summary of individual species totals for the four days of ringing in Ngangao Forest, Taita Hills.

	Species Common Name	Scientific Name	Forest Category	No. New	No. Recap.	Totals
1	Eastern-double Collared Sunbird	<i>Nectarinia mediocris</i>	F	3	0	3
2	Evergreen Forest Warbler	<i>Bradypterus lopezi</i>	FF	1	0	1
3	Lemon Dove	<i>Aplopelia larvata</i>	FF	2	0	2
4	Olive Sunbird	<i>Nectarinia olivacea</i>	FF	19	5	24
5	Stripe-cheeked Greenbul	<i>Andropadus milanjensis</i>	FF	12	5	17
6	Taita Thrush	<i>Turdus olivaceous helleri</i>	FF	0	1	1
7	Taita White-eye	<i>Zosterops poliogaster</i>	F	13	1	14
8	Tambourine Dove	<i>Turtur tympanistria</i>	F	1	0	1
9	White-starred Robin	<i>Pogonocichla stellata</i>	F	12	12	24
10	Yellow-throated Woodland Warbler	<i>Phylloscopus ruficapillus</i>	F	7	2	9
Totals				70	26	96

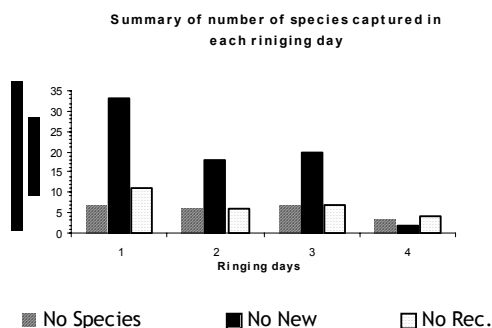


Figure 12: Summary of ringing totals at Ngangao, Taita Hills Forests

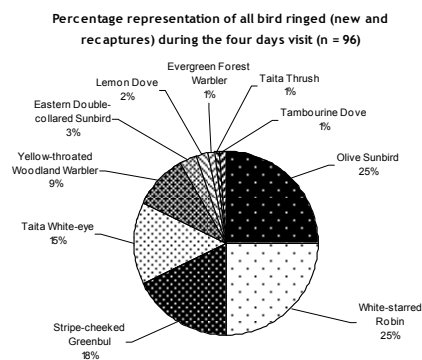


Fig. 13: Pie chart - total species and individuals

4. Supplementary Project Activities

4a) Training in MS Access and Adobe PageMaker

Philista Malaki and I took short courses in Adobe PageMaker and MS Access respectively in a commercial business training college in Nairobi. The objectives of these trainings were:

- a) Enable trainees acquire skills that will enhance the proficiency in data storage, data processing and desktop publishing.
- b) Improve the productivity of the ringing group in terms of communicating ringing as an art and science to interested parties.

Achievements

Skill gained especially in desktop publishing has enabled regular publication of the Ringing Group's Newsletter, *Merops*. Copies of these newsletters will be put in post. This is a simple Newsletter in which members share their experiences, and helps the group to keep in touch among them.

Skills gained in MS Access has enabled the organization of ringing data especially that of A Rocha Kenya's site in Karen, Nairobi, a site that has been identified as a constant effort site. We hope with more funding possibilities in the future, there will be more training opportunities in different computer softwares to enhance efficiency and performance of the group as a whole.

4b) Rufford Small Grants Manager's Visit

This project was greatly honored to have Mr. Josh Cole as our guest on the morning of 15th September 2005 at our traditional training ground at the Botanic Gardens, National Museums of Kenya in Nairobi. The morning started quietly with the first bird coming to the nets much later

than expected at 9am. This gave our guest and ringers a good time to chat on the project's activities and progress. This was a very positive thing to do as it was such a great thing to have to meet with one's donor. It enhances working relationships.

4c) Ngulia Palaearctic migrants ringing

Two groups of three participants each joined ringers of the Ngulia Ringing Group for a week-long stay during the 36th year of Palaearctic migrants ringing at Ngulia Safari Lodge in Tsavo West National Park. The participants were: Bernard Amakobe, Chege Kariuki, Philista Malaki, Henry Ndithia, Martha Nzisa and Shailesh Patel. The result of their contribution is provided in a separate report "**Ngulia Ringing Group: Thanks Autumn 2005**". The report shows totals of all species and individual birds

ringed during the season. This report is for private circulation and not for publication. The participants had a wonderful chance to meet with key ringers and ornithologists like Dr David Pearson - (also co-author of Kenya's best bird Field Guide); Mr Graeme Backhurst – Organizer of the eastern Africa Ringing Scheme; and Colin Jackson – Director A Rocha Kenya and founder of Nairobi Ringing Group among other ringers from Great Britain, South Africa, Belgium and Sweden. Our heartfelt thanks to all.

4e) Species Highlights

The project was privileged to have captured some key species of conservation importance and/or useful records. On the list is an **Olive Sunbird** captured in Nairobi at A Rocha Kenya's site in Karen. This is a rare sighting for Nairobi area. Other species important for this site were: Green Twinspot, White-headed Barbet, Lemon Dove, Black-throated Wattle-eye and African Goshawk

not to forget and albino Common Bulbul. In Taita Hills, we captured the globally-threatened **Taita White-eye** and **Taita Thrush** while news about the capture of two individuals of the globally-threatened **Spotted Ground Thrush** at Gede Ruins in north coast were exhilarating. At the Botanic Gardens at the Nairobi Museum, we caught some of our oldest captures in our history. These were

two **Singing Cisticolas** each of about 10 years old. One of these was first ringed on 6th February 1997, while the other one was first ringed on 23rd

October 1997. Both were recaptured in 2005 and 2006. Our list also enriched with a good number of Palearctic migrants.

5. Conclusion and Observations

Although this project achieved most of her objectives, there were a few activities that did not go as scheduled due to unavoidable circumstances. For instance, the demonstration planned for students at Kenya Wildlife Service Training Institute due to timing problem of suitable audience students at the college, and logistical problems due to the distance involved and transportation of resource persons and field equipment. I was however able to discuss with the Institute's Principle on how we could do it better in the future. I had also planned to have demonstrations for two community conservation groups that did not take place.

This required a great deal of preparations logistically to allow hosting the group in a learning environment. Again, a thorough planning particularly with transportation and camping requires time to plan for an effective even.

There were also trips meant for training in raptors and waders ringing. The objectives of waders training was taken care of by the avian flu surveillance project that had a rotational participation during which departmental staff and interns took part. It was however not possible to visit Mr Simon Thomsett for raptor training because of insecurity problems in his residence. This activity was taken care of by occasional catches during our activities.

Last but not least, there is an opportunity for achieving even higher goals in bird ringing training in Kenya despite the many challenges we face. We do need to keep on trying till we find individual indigenous Kenyans carrying out ringing activities on their own. In the future, I would like to take my training outside Nairobi into rural areas where such skills might contribute to conservation and socio-economic growth of the participants. In a few words, there is some light at the end of the tunnel!!

Acknowledgements

This project and her achievements would not have been possible without the generous financial support of the Rufford Small Grants (for Nature Conservation). I am greatly indebted to them. My thanks too to the Department of Ornithology of the National Museums of Kenya where I had a chance to implement and carry it out to the end. The Head of the Department, Dr Muchai Muchane, staff, interns and affiliates have been very helpful in many ways that contributed to the project immensely. I cannot also forget A Rocha Kenya for giving us permission to ring, camp and train at their property in Karen, Nairobi. At this site, Mzee John was very supportive during our camping at

the site as they were our other hosts at the site. Your support has always been very meaningful to the project's needs. I also express my thanks A Rocha's Director, Colin Jackson, for his valuable time training teams who went down to Mwamba. My special thanks to all the participants for such a highly motivated spirit, show of commitment and thirst for knowledge. You really kept the project's fire burning day in day out and trust your kindred and generous support will always be there today and in the future. I sincerely apologize to those whose names may have been accidentally left out or not mentioned here. May God bless you all.

Appendices

Appendix I: Participants

A: Interns and Departmental Staff

	Names	Gender	Job Title/Institution	Institution
1	Patricia Thiong'o	F	Research Intern	DoO-NMK
2	Mercy Mwanika	F	Research Intern	DoO-NMK
3	Shailesh Patel	M	Research Intern	DoO-NMK
4	Mwangi Wambugu	M	Research Intern	DoO-NMK
5	Chege Kariuki	M	Bird Guide/Kagu Project Officer	DoO-NMK/Nature Kenya
6	Philista Malaki	F	Research Scientist	DoO-NMK
7	Martin Mwema	M	IBA Research Fellow	DoO-NMK
8	Bernard Amakobe	M	Research Assistant GCSW Project	DoO-NMK
9	Henry Ndithia	M	Natural Resources Expert	Terra Nuova (NGO)
10	Titus Imboma	M	Undergraduate Student, UoN/Staff	DoO-NMK
11	Timothy Mwinami	M	Undergraduate Student, UoN/Intern	DoO-NMK
12	Kariuki Ntang'ang'a	M	Species Action Program Manager	BirdLife Africa
13	Dominic Kimani	M	Research Assistant (Kinangop)	DoO-NMK
14	John Musina	M	Research Scientist	DoO-NMK
15	Fred Barasa	M	Research Affiliate/Student UoN	DoO-NMK
16	Maurice Mugode	M	Research Intern	DoO-NMK
17	Maurice Ogoma	M	IBA Research Fellow	DoO-NMK
18	Simon Musila	M	IBA Research Fellow	DoO-NMK
19	Onesmus Kioko	M	Assistant Site Museum Officer	NMK Ologesailie
20	David Gitau	M	Research Assistant Taita Hills	DoO-NMK
21	Lawrence Wagura	M	Research Intern	DoO-NMK
22	Wanyoike Wamiti	M	Research Affiliate	DoO-NMK

B: Departmental Volunteers

	Names	Gender	Job Title/Institution	Institution
1	Martha Nzisa	F	Freelance Naturalist Guide	
2	Pauline Apondo	F	Volunteer	DoO-NMK
3	Joshua K. Wambugu	M	Volunteer	Nature Kenya
4	Moses Khazalwa	M	Freelance Naturalist Guide	
5	Simon Njenga	M	Tour Guiding College Student	Nairobi
6	Douglas Gachucha	M	Freelance Naturalist Guide	Based in Naivasha
7	Paul Gitau	M	Tour Guiding College Student	Nairobi
8	Francis Ngugi	M	Dip Env. SCi & Nat. Res. Mgt 1st yr	Kenya Polytechnic
9	Moses Kinuthia	M	Volunteer	A Rocha Kenya

C: University and College Students

	Name	Univesity/Institution	Course	Yr of Study	Period of Attachment
1.	Monica Njogu	Moi University, Eldoret	B.Sc Wildlife Management	1 st	June – August
2.	Susan N. Masoni	Moi University, Eldoret	B.Sc Wildlife Management	2 nd	June – August
3.	Protus Wanjala	Moi University, Eldoret	B.Sc Wildlife Management	3 rd	June – August
4.	Hudson Eboso	Moi University, Eldoret	B.Sc Wildlife Management	3 rd	Sept – Dec.
5.	Wambui Kariuki	University of Nairobi	B.Sc. Agriculture	2 nd	June – August
6.	Esther Muthoga	University of Nairobi	B.Sc. Agriculture	1st	June – August
7.	Joseph Mwangi	Moi University, Eldoret	B.Sc Wildlife Management	3 rd	June – August
8.	Mercy Ndara	N.T.T.C.	Dip. Applied Biology	2 nd	Sept'05 – Jan'06
9.	Jambali	Moi University, Eldoret	B.Sc Wildlife Management	1 st	June – Aug.
10.	Geoffrey Thuraira	KWS Training Institute	Dip Env. Science	Out	June-Sept.
11.	Francis Ngugi	Kenya Polytechnic	Dip Env. SCi & Nat. Res. Mgt	1st	Joined in Sept.
12.	Hamisi Maneno	Univ. of Zanzibar	Tanzania	MSc	Nov'05 - Jan '06

Appendix 2: List of bird species that were ringed during the project period from the five main sites (alphabetically listed).

1 Abyssinian White-eye	47 Montane White-eye
2 African Citril	48 Nightngale
3 African Dusky Flycatcher	49 Northern Double-coloured Sunbird
4 African Goshawk	50 Olive Sunbird
5 African Moustached Warbler	51 Olive Thrush
6 African Paradise Flycatcher	52 Pin-tailed Whydah
7 African Pygmy Kingfisher	53 Purple Grenadier
8 Amethyst Sunbird	54 Rattling Cisticola
9 Baglafecht Weaver	55 Red-backed Shrike
10 Black Cuckoo Shrike	56 Red-billed Firefinch
11 Black Kite	57 Red-collared Widowbird
12 Black-and-white Mannikin	58 Rufus Sparrow
13 Black-backed Puff-back	59 Ruppell's Robin-Chat
14 Blackcap	60 Singing Cisticola
15 Black-collared Apalis	61 Slate-coloured Boubou
16 Black-headed Weaver	62 Speckled Mousebird
17 Black-throated Wattle-eye	63 Spectacled Weaver
18 Bronze Mannikin	64 Spotted Morning Thrush
19 Bronze Sunbird	65 Sprosser
20 Cabanis's Greenbul	66 Streaky Seedeater
21 Cape Robin-Chat	67 Tawny-flanked Prinia
22 Chin-spot Batis	68 Tropical Boubou
23 Cinnamon-chested Bee-eater	69 Variable Sunbird
24 Collared Sunbird	70 Village Indigobird
25 Common Bulbul	71 White-browed Scrub Robin
26 Common Fiscal	72 White-eyed Slaty Flycatcher
27 Crimson-rumped Waxbill	73 White-headed Barbet
28 Dark-capped Yellow Warbler	74 White-starred Robin
29 Eastern-doubled Collared Sunbird	75 Willow Warbler
30 Eurasian Reed Warbler	76 Winding Cisticola
31 Garden Warbler	77 Yellow-breasted Apalis
32 Golden-breasted Bunting	78 Yellow-rumped Tinkerbird
33 Golden-winged Sunbird	79 Yellow-whiskered Greenbul
34 Great Reed Warbler	
35 Green-backed Twinspot	
36 Green-headed Sunbird	
37 Grey Apalis	
38 Grey-backed Camaroptera	
39 Grey-capped Warbler	
40 Grey-headed Sparrow	
41 Grosbeak Weaver	
42 Hadada Ibis	
43 Holub's Golden Weaver	
44 Klaas's Cuckoo	
45 Lemon Dove	
46 Malachite Kingfisher	

Appendix 3: List of species ringed at A Rocha Kenya's site in Karen, Nairobi from Jan. 2005 to March 2006, listed as either seen (s), heard (h) or ringed (r).

Osc#	Common Name	Scientific Name	Ecol	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
Threskiornithidae: Ibises & Spoonbills																			
1	62	Hadada Ibis	<i>Bostrychia hagedash</i>			s	s	s			h	h							5
Accipitridae: Birds of Prey																			
2	102	Black Kite	<i>Milvus migrans</i>			s													1
3	125	African Goshawk	<i>Accipiter tachiro</i>	F			s	h	r			s							4
4	134	Great Sparrowhawk	<i>A. melanoleucus</i>	F		s	s		s										3
5	142	Augur Buzzard	<i>Buteo augur</i>			s													1
Columbidae: Pigeons & Doves																			
6	369	Lemon Dove	<i>Aplopelia larvata</i>	FF	r				r			r						r	4
7	370	Red-eyed Dove	<i>Streptopelia semitorquata</i>									h							1
Musophagidae: Turacos																			
8	398	Hartlaub's Turaco	<i>Tauraco hartlaubi</i>	FF	s	s	s	s	s		s	h							8
Cuculidae: Cuckoos & Coucals																			
9	409	Red-chested Cuckoo	<i>Cuculus solitarius</i>	F		h		h											2
10	417	African Emerald Cuckoo	<i>Chrysococcyx cupreus</i>	F	h														1
11	419	Klaa's Cuckoo	<i>C. klass</i>	f				h					r						2
Strigidae: Typical Owls																			
12	444	African Wood Owl	<i>Strix woodfordi</i>	F	h		h	h				s							4
Caprimulgidae: Nightjars																			
13	449	Montane Nightjar	<i>Caprimulgus poliocephalus</i>	F	h														1
Coliidae: Mousebirds																			
14	480	Speckled Mousebird	<i>Colius striatus</i>					r				s							2
Meropidae: Bee-eaters																			
15	501	Eurasian Bee-eater	<i>Merops apiaster</i>	f			h												1
16	514	Cinnamon-chested Bee-eater	<i>Merops oreobates</i>	F		s	s												2

Osc#	Common Name	Scientific Name	Ecol	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
Capitonidae: Barbets & Tinkerbirds																			
17	563	Yellow-rumped Tinkerbird	<i>Pogoniulus bilineatus</i>	F		r	h	r				h							4
18	572	White-headed Barbet	<i>Lybius leucocephalus</i>											r					
Motacillidae: Wagtails, Pipits & Longclaws																			
19	673	African Pied Wagtail	<i>Motacilla aguimp</i>		s	s					s								3
Pycnonotidae: Bulbuls																			
20	702	Yellow-whiskered Greenbul	<i>Andropadus latirostris</i>	F	h	r	r	r	r	r	r	r	r	r		r		r	13
21	713	Cabanis's Greenbul	<i>Phyllastrephus cabanisi</i>	FF	r	r	r	r	r	r	r	r		r		r	r	r	13
22	729	Common Bulbul	<i>Pynonotus barbatus</i>	f		r	r	s	s		r	s	s	r			r		9
Turdidae: Thrushes, Chats & relatives																			
23	756	White-starred Robin	<i>Pogonichla stellata</i>	F	r	r	r	r	r	r	r		r	r				r	11
24	769	Cape Robin-Chat	<i>Cossypha caffra</i>	f						r			r				r	r	4
25	771	Ruppel's Robin-Chat	<i>Cossypha semirufa</i>	F	r	r	r	r	r	r	r	h	r	r			r		12
26	784	Nightngale, Thrush	<i>Luscinina megarhynchos</i>											r					1
27	786	White-browed Scrub Robin	<i>Cercotrichas leucophrys</i>										r						1
28	816	Olive Thrush	<i>Turdus olivaceus</i>	F		r	r	r	s									r	5
Muscicapidae: Old World Flycatchers																			
28	831	African Dusky Flycatcher	<i>Muscicapa adusta</i>	F			r												1
29	840	White-eyed Slaty Flycatcher	<i>Melaenornis fischeri</i>	F				s			r						r		3
Sylviidae: Old World Warblers																			
30	869	Garden Warbler	<i>Sylvia borin</i>											r					1
31	870	Blackcap	<i>Sylvia atricapilla</i>	F		r								r			r		3
32	873	Willow Warbler	<i>Phylloscopus trochilus</i>	f			r												1
33	891	Dark-capped Yellow Warbler	<i>Chrolopetta natalensis</i>				r												1
34	893	Singing Cisticola	<i>Cisticola cantans</i>				r	h	r		r	h	r	r					7
35	924	Tawny-flanked Prinia	<i>Prinia subflava</i>	f						r								r	1
36	933	Grey-backed Camaroptera	<i>Camaroptera brachyura</i>	f	r	r	r	r	r		r	r		r		r		r	11
37	936	Yellow-breasted Apalis	<i>Apalis flavida</i>	f			r												1
38	945	Grey Apalis	<i>Apalis cinerea</i>	FF			r	h	h			h							4
39	950	Black-collared Apalis	<i>Apalis pulchra</i>	F			r			r		r		r					4

40	957	Grey-capped Warbler	<i>Eminia lepida</i>												r					1
	Osc#	Common Name	Scientific Name	Ecol	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
		Zosteropidae: White-eyes																		
41	982	Montane White-eye	<i>Zosterops polioaster</i>	F		s		s	r	r		r	r							6
		Monarchidae: Monarch Flycatchers																		
42	1007	African Paradise Flycatcher	<i>Terpsiphone viridis</i>	f			s							r						2
		Platysteridae: Batises, Wattle-eyes & relatives																		
43	1013	Chin-spot Batis	<i>Batis molitor</i>			s			h				h							3
44	1020	Black-throated Wattle-eye	<i>Platysteria cyanea</i>	F	r									r					r	3
		Malaconotidae: Bush-shrikes																		
45	1064	Tropical Boubou	<i>Laniarius aethiopicus</i>	f		h	r	h	h			h	r							6
46	1072	Black-backed Buffback	<i>Dryoscopus cubla</i>	F		h	h	s	h			h	h							6
		Campephagidae: Cuckoo-shrikes																		
47	1076	Black Cuckoo-shrike	<i>Campephaga flava</i>	f		s				r		r								3
		Corvidae: Crows & allies																		
48	1095	Pied Crow	<i>Corvus albus</i>				s		s				s							3
		Nectariniidae: Sunbirds																		
49	1140	Collared Sunbird	<i>Anthreptes collaris</i>	F		r	r	r	r	r	r	r	s		r			r	r	11
50	1143	Olive Sunbird	<i>Nectarinia olivacea</i>										r							1
51	1146	Green-headed Sunbird	<i>Nectarinia verticalis</i>	F				r												1
52	1149	Amethyst Sunbird	<i>Nectarinia amethystina</i>	f			r	r	r				r	r	r					6
53	1152	Variable Sunbird	<i>Nectarinia Venusta</i>	f			r		r	r			r	r					r	6
54	1159	Northern Double-collared Sunbird	<i>Nectarinia preusi</i>																r	1
55	1161	Eastern Double-collared Sunbird	<i>Nectarinia mediocris</i>	F								r	h							2
56	1179	Bronze Sunbird	<i>Nectarinia kilimensis</i>	f			r	r	s				s		r					5
57	1180	Golden-winged Sunbird	<i>Nectarinia reichenowi</i>	f			r	r												2
		Ploceidae: Weavers & relatives																		
58	1205	Baglafaecht Weaver	<i>Ploceus baglafaecht</i>	f			r		r		r	s	s							5

Osc#	Common Name	Scientific Name	Ecol	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
59	1210	Spectacled Weaver	<i>Ploceus ocularis</i>	f				r	r			r							3
60	1214	Holub's Golden Weaver	<i>Ploceus xanthops</i>			s	s												2
61	1262	Red-collared Widowbird	<i>Euplectes ardens</i>						r										1
Estrildidae: Waxbills																			
62	1287	Green-backed Twinspot	<i>Mandingoa nitidula</i>	FF							r								1
63	1293	Red-billed Firefinch	<i>Lagonosticta senegala</i>			r													1
64	1318	Bronze Mannikin	<i>Lonchura cucullata</i>					s				s		r				r	4
65	1319	Black-and-white Mannikin	<i>L. bicolor</i>									r		r					2
66	1328	Pin-tailed Whydah	<i>Vidua macroura</i>			r	r												2
67	1343	Streaky Seedeater	<i>Serinus striolatus</i>	f	s	r		r	r		r		r	r				r	8
68	1354	Golden-breasted Bunting	<i>Embriza flaviventris</i>		s					r									1
Total Species				12	21	34	26	32	15	10	21	30	14	17	0	3	5	16	

Key: FF – Forest specialists F – Forest generalists f – Forest visitors

Osc No. – Ornithological Sub-committee of East African Natural History Society's (1986) species number.