Project Blue Swallow.

Project report:

with funding from to the BP Conservation Programme

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Contents

Project Blue Swallow.

1) Introduction.

The Blue Swallow (Hirundo atrocaerulea) has a range of ten African countries including South Africa, Swaziland, Zimbabwe, Mozambique, Malawi, Zambia, Democratic Republic of Congo, Tanzania, Uganda and Kenya. The distribution of the Blue Swallow is fragmented over much of its range and the migratory or dispersal behaviour of this species is sparsely documented and unclear. The global Blue Swallow population is classified as Vulnerable under IUCN/BirdLife International threat criteria, and its habitat is disappearing rapidly (BirdLife International 2000). The South African and Swaziland population is classified as Critically Endangered and the East Africa population is classified as Endangered.

The Blue Swallow is an intra-African migrant with breeding populations in South Africa, Swaziland, Zimbabwe, Mozambique, Malawi, Zambia, Democratic Republic of Congo and Tanzania (Turner & Rose 1989). From throughout their breeding range the Blue Swallows migrate in the non-breeding season to Uganda, Kenya, DRC and Tanzania (Earle 1987, Oatley 2001) and among these Uganda seems the most important non-breeding range. The furthest north that a Blue Swallow has ever been recorded is Kidepo Valley National Park that has its north-western boundary on the border between Uganda and Sudan in the north-eastern part of Uganda (Butchard 1996).

The Blue Swallow is a globally threatened sub-Saharan African grassland endemic but grasslands are one of the most intensively inhabited and altered ecosystems. In Uganda Blue Swallows were known from scattered distribution records around Lake Victoria basin, Queen Elizabeth National Park in western Uganda, and Kidepo Valley National Park in northeastern part of Uganda.

Historical records (Appendix 1)and current information on Blue Swallow distributions in Uganda formed the foundation of determining the first set of areas that needed to be surveyed. This information supplied data on the preferred grassland/wetland types and cadastral features preferred by the birds. This information was used to identify and select further areas to be surveyed.

Uganda is currently believed to contain the major non-breeding range of Blue Swallow but no detailed surveys had ever been conducted to confirm this belief.

The main Blue Swallow localities in Uganda are currently within the identified Important Bird Areas. However extend and distribution of this species was not documented and Project Blue Swallow results confirmed the importance of Uganda to the conservation and survival of the bird. The results confirmed the importance of Lake Victoria basin as the most important non-breeding areas for the species and records in Kidepo were probably vagrants.

Identification of the major threats to these areas and incorporation of them into the Important Bird Areas Conservation Programme results in the areas selected due to this survey forming part of a conservation programme aimed at improving the conservation status of the selected Important Bird Areas. Important Bird Areas are selected according to international criteria designed to select sites of global importance for biodiversity conservation using birds as the primary indicators.

NatureUganda together with Forest Department through GEF Crossborder biodiversity Project have proposed a conservation strategy for the Blue Swallow to be included in the ongoing process of drafting management plan for the combined Sango Bay Forest Reserve Management Plan. **Other publicity materials are attached to the report.**

2) Aims & Objectives.

2.1) Aim.
To assess the distribution and conservation status of the Blue Swallow on its non-breeding range in Uganda. To collect information that can be used to providing justification for selecting further Important Bird Areas in Uganda.

2.2) Objectives.

a) To identify the major Blue Swallow non-breeding localities in Uganda.
b) To assess the size of the Blue Swallow populations in each of localities in which the birds are located in Uganda.
c) To identify the major threats to Blue Swallow grassland habitats in Uganda.
d) To identify Blue Swallow localities in Uganda that should be selected as Important Bird Areas (Important Bird Areas Conservation Programme).
e) To determine the diversity and relative abundance of all bird species using the same habitat as Blue Swallows.
f) To provide preliminary recommendations on improving the conservation status of these Important Bird Areas.
g) To transfer knowledge and expertise between the team composed of Ugandan's and a South African.
h) To develop a team of Ugandan ornithologists to continue survey work in the country.
i) To strengthen long-term conservation and research links between South Africa and Ugandan conservationists.
j) To put the Blue Swallow onto Ugandan research and conservation agenda's.
k) To complete a rapid assessment of the tourism potential of each locality surveyed for Blue Swallows.

3) Methods.

3.1) Selection and composition of the survey team.
The team of eight people consisted of a representative from Nature Uganda and BirdLife South Africa and 6 students from Makerere University, Kampala. The six students were recruited by advertising at the Makerere University for six people interested in contributing and learning from these surveys.

1. Steven W. Evans, Project Co-ordinator, BirdLife South Africa, MSc (Zoology), currently completing a PhD (Zoology) on Blue Swallows in South Africa..
2. Achilles Byaruhanga, Project Co-Co-ordinator, Nature Uganda, BSc (Zoology), currently completing an MSc (Zoology) on wetland birds in Important Bird Areas.
3. Godfrey Mawadri, Student, Makerere University, Kampala, BSc (Zoology & Geography).
4. Rose Norah Komugisha, Makerere University, Kampala, Student, BSc (Zoology & Botany).
5. Joan Asiimwe, Student, Makerere University, Kampala, BA (Tourism).
6. Angella Nannono, Student, Makerere University, Kampala, BA (Tourism).
7. Michael Malinga, Student, Makerere University, Kampala, BSc (Forestry).
8. Lazarus Oketch, Student, Makerere University, Kampala, BSc (Forestry).

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3.2) Academic and technical supervision.

- 9. Prof Henk Bouwman, Department of Zoology, Potchefstroom University for CHE, South Africa and South African Agricultural Research Council, Plant Protection Research Institute, Pesticide Dynamics Section.
- 10. Dr Aldo Berruti: Director of BirdLife South Africa.
- 11. Dr Pantaleon Kasoma: Chairman of Nature Uganda.

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3.3) Preparatory work.

Training and preparatory work was completed during a workshop of all team members. The workshop venue was Banana Village between Entebbe and Kampala. The time was used to introduce the team members to the Blue Swallow, the aims and objectives of Project Blue Swallow, select the sites to be surveyed and introduce the team to various field survey techniques and decide on the techniques to use during this study. The data-sheets were compiled and field tested during a visit to Mabamba Swamps. The months project agenda was discussed and agreed.

Preparatory activities programme.

Date & Time	Time (min)	Activity	Description	Responsible person
Wednesday 25th July 2001				
Afternoon.		Meet at Nature Uganda and travel to Banana Village.		
Thursday 26th July 2001				
08:30 – 09:00	30	The team meets.	Informal discussion and everyone introduces themselves.	AB
09:00 – 10:00	60	Introduction to the Blue Swallow	Presentation (45 min) followed by 15 min for questions.	SE
10:00 – 10:30	30	Introduction to Project Blue Swallow: Aims and Objectives.	Presentation (15 min) followed by 15 min for questions.	SE
10:30 – 11:00	30	Tea / Coffee		
11:00 – 11:30	30	Historic and current Blue Swallow localities in Uganda. Which sites do we survey?	Presentation (15 min) followed by 15 min for questions and discussion.	AB
11:30 – 12:30	60	Introduction to the field survey methods and examples of field data-sheets.	Presentation (30 min) followed by 30 min for questions and discussion.	AB
12:30 – 14:00		LUNCH		
14:00 – 18:00	240	Compiling field data-sheets for Project Blue Swallow. - Data recording sheet. - Tourism assessment and threats assessment.	Group discussion / activity.	AB
Friday 27th July 2001				
07:00 – 15:00	480	Morning visit to Mabamba Swamps.	Familiarise the team with the habitat, Blue Swallow and other bird species to be surveyed. Field-test the data-sheets. Discuss and agree changes to the data-sheets.	The team
15:00 – 17:00	120	Agree and compile the agenda for the next months survey	Discuss time constraints and other commitments that students	AB / SE

		work.	may have to complete during their vacation.	
15:00 – 18:00	180	Return to Kampala.		The team
Saturday 28th July 2001				
15:00 – 18:00	180	Purchase of provisions	Group activity	AB and everyone
Sunday 29th and Monday 30th July 2001				
	2 days	Travel to Kidepo Valley National Park.	Travel.	The team

3.4) Selection of sites to be surveyed.
All verified records of Blue Swallow sightings were obtained from the Ugandan Bird Atlas Project. This includes all published and some unpublished sight records of Blue Swallow localities in Uganda.
All literature related to Blue Swallows in Uganda was collected and read prior to the surveys.

The Ugandan Bird Atlas Project site data on Blue Swallows was plotted on a map of Uganda and five localities that contain Blue Swallows were identified. These localities are Kidepo Valley National Park, Busia Grasslands area, Queen Elizabeth National Park, Sango Bay, Mabamba Swamps. A further locality (Nabugabo) was identified as it contains similar habitat to Sango Bay. Sango Bay is the area in which the largest concentration of Blue Swallows had been observed for Uganda. Byruhanga (*pers. comm.*) reports seeing approximately 85 Blue Swallows perched together in June 2001.

3.5) Timed Species Counts (TSC).
The general principles of the TSC recording method (Bibby *et al* 1998, Pomeroy 1992, Pomeroy and Tangecho, 1986) are followed but due to limited time that is allowed at each sample site, two adjustments are made to capture as much information as possible. It was discussed and agreed that a timed species count would be the most effective way of recording not only Blue Swallow numbers in any area but also the number of other birds sharing the Blue Swallow habitat.
Instead of continuous recording for one hour, a species list is generated for every 10-minute period. Secondly, the number of individuals of each species seen or heard within 50 m either side of the rout walked is also recorded. The abundance measure, therefore, is determined from the 10-minute period encounter rates i.e. if a species is recorded in every 10-minute period, it will have a score of six and if it is seen many times in one 10-minute period it will have a score of one but the total number of individual birds will be noted (counted or estimated). The habitat characteristics where the species/ individuals are seen are recorded which helps in determining the most important habitat characteristic for the species. Therefore each record of the species sighting is accompanied by a habitat code (Byaruhanga A. 2002). The rout walked need not follow a straight line. Previous studies had proved that walking at a speed of 1 km per hour significantly reduced the chances of the same birds being counted repeatedly

3.6) Standard data collection sheets.
Standardised data collection sheets were compiled by the team members. These data-collection sheets were field tested during a preparatory visit to Mabamba Swamps. Minor changes to the field data-sheets were made after the field testing at Mabamba Swamps.

3.7) Itinerary.

Date & Time	Time (min)	Activity	Description	Responsible person
Saturday 28th July 2001				
15:00 – 18:00	180	Purchase provisions	Group activity	AB and Everyone
Sunday 29th and Monday 30th August 2001				
	2 days	Travel to Kidepo Valley National Park	Travel.	The team
Tuesday 31st to Thursday 02nd August 2001				
	3 days	Research and survey work at Kidepo Valley National Park		The team
Friday 03rd to Saturday 04th August 2001				
	2 days	Travel to Busia grasslands	Travel	The team
Sunday 05th to Tuesday 07th August 2001				
	3 days	Research and survey at Busia grasslands		The team
Wednesday 08th August 2001				
	1 day	Travel to Kampala	Travel	The team
Thursday 09th to Friday 10th August 2001				
	2 day	Free days		The team
Saturday 11th August 2001				
	1 day	Travel to Queen Elizabeth National Park	Travel	The team
Sunday 12th to Tuesday 14th August 2001				
	3 days	Research and survey at Queen Elizabeth National Park		Th team
Monday 15th August 2001				
	1 day	Travel to Sango Bay	Travel	The team
Tuesday 16th to Thursday 18th August 2001				
	3 days	Research and survey at Sango Bay		The team
Friday 19th August 2001				
	1 day	Travel to Nabugabo		The team (without SE)
Saturday 20th to 22nd Monday 2001				
	3 days	Research and survey at Nabugabo		The team (without SE)
Tuesday 23rd August 2001				
	1 day	Travel to Mabamba Swamps	Travel	The team (without SE)
Wednesday 24th to Friday 26th August 2001				
	3 days	Research and survey Mabamba Swamps		The team (without SE)
Saturday 27th August 2001				
	1 day	Travel to Kampala		The team

3.8) Process followed on each site.
Three days were allowed in order to survey each site effectively. On the first day the area would be searched for Blue Swallows in the appropriate grassland and wetland habitats. On day two the areas were Blue Swallows are located would be surveyed, the threat assessment completed and tourism potential recorded using the agreed techniques. Any areas in which Blue Swallows were located and were not surveyed on day two would be surveyed, the threat assessment completed and tourism potential recorded using the agreed techniques on day three. This resulted in adequate time being spent in each locality and allowed for the survey of at least six sites throughout the month long project.

During the surveys two teams consisting of four people each were formed. Each team of four surveyed a different area. Within each team; two members would be involved in completing a timed species count and along the same transect the other two people recorded the threats, their intensity and completed an assessment of the tourism potential of the area. The role of each team member alternated giving each an opportunity to complete all survey activitie.

Localities with suitable road coverage were surveyed from the vehicle (on the firs day only) by making regular stops in order to inspect for Blue Swallows. Localities with limited road coverage were surveyed on foot.

3.9) Logistics.
Transportation for the surveys was graciously supplied by Nature Uganda and Makerere University Institute of Natural Resources. The vehicle to be used was purchased for the implementation of the IBA Conservation Programme in Uganda.
Funding for the vehicle purchase was supplied by the GEF. Field equipment for camping etc. wads supplied by The Makerere University Institute of Natural Resources.
The taking of Malaria prophylactics commenced 1 week prior to departure for the BirdLife South Africa team member.

3.10) Local participation and approval.
Research permits were required for Queen Elizabeth National Park. These were obtaibned fom the Uganda Wildlife Authority. Incorporation of the Blue Swallow localities identified as Important Bird Areas during the survey results in these areas being recognised as legitimate areas important for biodiversity conservation.

An attempt was made to identify Blue Swallow roost sites by speaking to local inhabitants and traditional healers by showing them photographs and bird field-guide illustrations of Blue Swallows in Kidepo Valley National Park and in the Busia area. Unfortunately this did not produce any results.

4) Preliminary results.
A total of 550 Blue Swallows were counted during the surveys. Using timed species counts a total of 237 Blue Swallows were counted, 85 male, 148 female and 4 birds showing signs of juvenile plumage.

Table 1. The number of male, female, juvenile and total number of Blue Swallows counted during timed species counts at four localities in Uganda in August 2001.

Locality	Male	Female	Juvenile	Total
Kidepo Valley National Park		2		2
Sango Bay	50	93	1	144
Nabugabo	18	37	2	57
Mabamba	17	16	1	34
TOTAL	**85**	**148**	**4**	**237**

Table 2. The total number of Blue Swallows counted outside of timed species counts at four localities in Uganda in August 2001.

Locality	Outside TSC	During TSC	Total per site
Kidepo Valley National Park	0	2	2
Sango Bay	88	144	232
Nabugabo	158	57	215
Mabamba	67	34	101
TOTAL	**313**	**237**	**550**

Table 3. The density (no. per km^2) of male, female, juvenile and total number of Blue Swallows recorded using timed species counts (TSC's) conducted in four localities in Uganda in August 2001. Only the timed species counts on which Blue Swallows were recorded are included in the analyses.

Locality	No. of TSC's.	Total area surveyed (km^2)	Male/km^2	Female/km^2	Juvenile / km^2	Total / km^2
Kidepo Valley National Park	1	0,1		20		20
Sango Bay			50	93	1	144
Nabugabo			18	37	2	57
Mabamba			17	16	1	34
TOTAL			**85**	**148**	**4**	**237**

5) Achievement of objectives.

Objectives	Status and progress
To identify the major Blue Swallow non-breeding localities in Uganda.	All known localities for Blue Swallows were visited and major areas identified and counts complete for the easily accessible areas. The major sites include; Sango bay, Nabugabo and Mabamba bay all found on the north western side of Lake Victoria During the surveys, the blue swallow was found to be associated with seasonally flooded grasslands mainly areas with *Lodetia* and *Miscanthus* species of grasses. On one

	occasion the birds were found roosting in a potato garden with many termite mounds. The birds were also seen to be closely associated with grazing animals and areas of burnt grass. Blue swallows associated with other Hilundines such as Banded Martins, Grey-rumped Swallows, and White-headed Rough wing. In Nabugabo and Sango Bay Blue Swallows observed drinking water from ponds left behind from sand extraction. Nabugabo and Sango bay were the only areas where the birds were observed roosting. Many areas of suitable Blue Swallow habitat are not easily accessed and there are certainly some of these that are unidentified and contain Blue Swallows. We also believe that the figure in the total count is an underestimate realising that many suitable sites were not easily accessible.
To assess the size of the Blue Swallow populations in each of localities in which the birds are located in Uganda.	Complete. An attempt was made to count all Blue Swallows in the localities but due to inaccessibility of the habitats the numbers estimated may be underestimates. Sango bay had the highest count with 232, followed by Nabugabo with 215 and Mabamba with 101 individuals. All these sites are Important Bird Areas.
To identify the major threats to Blue Swallow grassland habitats in Uganda.	Complete. All threats as encountered were recorded but due to limited time spent at a site, they were not quantified. However, the major threat to seasonally flooded grasslands is drainage for other uses such as agriculture. Over 30% of Uganda's wetlands have been lost due to conversion to other uses. Other include burning, overgrazing
To identify Blue Swallow localities in Uganda that should be selected as Important Bird Areas (Important Bird Areas Conservation Programme).	Complete. All localities in which Blue Swallows were identified were IBAs. However, the surveys showed that BS occurred beyond the known IBA boundaries. In some IBAs such as Nabugabo Blue Swallows had not been record there before and the occurrence of Blue Swallows has given the site even a stronger case for Ramsar listing.
To determine the diversity and relative abundance of all bird species using the same habitat as Blue Swallows.	Complete. The results are in the process of being analysed. A total of 75 species other then Blue Swallow were recorded during the surveys. Banded Martin, White-headed Roughwing, Grey-rumped Swallows and Barn Swallows were observed feeding in similar habitats to Blue Swallows.
To provide preliminary recommendations on improving the conservation status of these Important Bird Areas.	Ongoing. Results of the surveys have formed basis for monitoring the sites, have been used and contributed to Ramsar designation criteria for Nabugabo and Mabamba IBAs. Development of Community wetlands management plans for the two sites is in progress, and Sango bay Forest Reserves boundaries have

	been extended to include the grasslands that contain Blue Swallows. Information acquired during the surveys provided basis for formulation of strategies for the conservation of Blue Swallows in the non-breeding range in the International Blue Swallow Action Planning workshop.
To transfer knowledge and expertise between the team composed of Ugandan's and a South African.	Complete. Six Uganda students participated in the surveys All the data will be submitted to the National Biodiversity data bank in Uganda, which will constitute the biggest number of records for the species.
To develop a team of Ugandan ornithologists to continue survey work in the country.	Initiated by Project Blue Swallow and ongoing. Students participate in the surveys and are now regular NatureUganda volunteers on Waterbird census and nature walks. Angela is managing an ecotourism project in one the stronghold areas for Blue Swallows, Sango bay and Joan works with a tour company.
To strengthen long-term conservation and research links between South Africa and Ugandan conservationists.	Achieved. Achilles Byaruhanga recently attended and contributed to an International Blue Swallow Action Planing meeting funded by the RSPB and UK Darwin Initiative. The Action Plan identified various projects, strategies and activities for the conservation of the species in the two countries as well as other range states.
To put the Blue Swallow onto Ugandan research and conservation agenda's.	Ongoing. This was initiated by the survey work and is being taken further by the implementation of the International Blue Swallow Action Plan. A number of strategies were proposed in the international plan for research and monitoring. A National Blue Swallow Action Plan workshop is planned for Uganda in 2003. This is expected to high light the research and conservation agenda for the species in the country. The Blue Swallow has subsequently been proposed and accepted as a protected species in Uganda.
To complete a rapid assessment of the tourism potential of each locality surveyed for Blue Swallows.	Complete. The results are in the process of being analysed. It is important to note however that Mabamba, Nabugabo, and Sango Bay have become major tourist destinations because of the Blue Swallow. The Uganda Bird Guides Club have included the above sites as major destinations for bird watchers in Uganda which has greatly supplemented ecotourism development project through local communities that started with the IBA programme.

6) Outputs and Conservation Action.
The Important Bird Areas Conservation Programme funded by the Global Environmental Facility (GEF) under the title of NGO-Government Partnership for Sustainable Biodiversity Action is underway in 9 African countries including Kenya and Uganda. The DRC, Zambia and Mozambique are not part of this GEF funded programme. Part of the implementation structure is the formation of a National Liaison Committee (NLC), in and for each country, consisting of representatives from the implementing national NGO, national government and other national and international NGOs. The NLC provides the opportunity for direct contribution into the setting of national biodiversity priorities and strategies. A project report, Project Blue Swallow, will therefore be submitted to the NLCs that have already been established in Kenya and Uganda. The project report will be submitted to the South African NLC and in particular the representatives from the South African Department of Environmental Affairs and Tourism. This will contribute to their preparations for the Blue Swallow Range States meeting as the listing country in compliance with the stipulations of the Convention on the Conservation of Migratory Species of Wild Animals.

An Important Bird Areas project manager is in place in Uganda. Based on the biodiversity priorities determined by the NLCs the IBA project manager is to establish IBA Support Groups consisting of representatives from local communities, government officials and other NGO's for the selected priority IBAs. In this manner IBA specific conservation action, advocacy and monitoring will be initiated. It is recognised that effective implementation of advocacy requires incorporating economic gains into the conservation equation. The IBA Support Groups for the IBAs identified and containing Blue Swallows will receive copies of the final project report, Project Blue Swallow.

Articles have been submitted to popular birding and travel publications such as the BirdLife South Africa Newsletter, Africa Birds & Birding, Black Eagle Publishing, South Africa, the Naturalist in Uganda, as well as print media.

7) Lessons learnt and recommendations.
a) Six of the team members had never seen a Blue Swallow before. The visit to Mabamba Swamps was therefore invaluable as it provided an opportunity for the entire team to see Blue Swallows before the survey started.

b) The visit to Mabamba Swamps was an opportunity for every member of the team to field test the newly designed data-sheets and make recommendations on how they could be improved. The recommended improvements were discussed by the team agreed upon and incorporated into the final product. This processed improved peoples involvement and confidence in the final product and its use.

c) Due to a tight budget and as all project costs were covered it was made clear to all volunteers (6 students) at the beginning that there would be no per diem. This in retrospect created problems and in the future the recommendation would be to always allocate some funding (however small) to a daily allowance for each of the volunteers.

d) Regular formal meetings should be held throughout the survey work in order to discuss issues. In the absence of formal meetings involving all team members issues were raised at the last minute when it was not possible to make and accommodate necessary changes. The result was that certain team members were absent during the survey of certain areas.

e) More time and attention should have been given to making sure all team members learnt the calls of the more difficult groups of birds to identify (e.g. *Cisticola* spp.).

f) Potential new Blue Swallow habitats and sites identified as described above will be recommended for additional survey work.
g) The team discovered that the Blue Swallows occupied slightly different habitats in the non-breeding range from the breeding areas
h) Some sexual displays were noted which might indicate that pair formation starts in the non-breeding areas
i) Blue Swallows occupy non-protected areas in the non-breeding range which calls for a multi-sectoral approach for the conservation of the species

8) Next Steps.

i) Process all the results (Blue Swallows counted, habitat, threats, bird species communities), compile a paper and submit to a pier-reviewed scientific journal for publication by February 2003.
ii) Prepare a National Species Action Plan for Uganda which will spell out strategies for the conservation of Blue Swallow in the country. This plan will ensure participation of all stakeholders including Uganda Wildlife Authority, Wetlands Inspection Division and local government authorities.

12. Prepare a proposal for a follow on project especially the implementation of the strategies in the International and National Species Action Plans. This may be submitted to BP Conservation programme.
13. Continue to advocate for the conservation of the sites where Blue Swallows were observed especially listing them as Ramsar sites.
14. Continue involving the participants of the Project Blue Swallow so that they advance

9) Budget and expenditure.

Sum of Pounds Sterling Budget	Detail	Total Pounds Sterling	Total Uganda Shilling
Administration	Communication	30.00	78,000
	Flights	265.50	690,300
	Stationery	2.92	7,600
	Training	72.42	188,300
	Visas	16.88	43,875
Administration Total		387.72	1,008,075
Equipment	Field rations	95.19	247,500
	Maps	3.85	10,000
	Medical	19.15	49,800
Equipment Total		118.19	307,300
Field expenses	#Unspecified expenses	6.54	17,000
	Field rations	404.15	1,050,800
	Fuel costs	671.52	1,745,960
	Living costs	1789.58	4,652,900
	Local field guides	184.15	478,800
	Medical	2.77	7,200
	Travel allowance	93.65	243,500
	Vehicle use	983.85	2,558,000
Field expenses Total		**4136.22**	**10,754,160**
Post Project expenses	Photography (develop and printing)	23.08	60,000
Report preparation and production(missing for 100,000)		61.54	160,000
Post Project expenses total			
Total spent		**4703.67**	**12,129,535**
Total received		**4737.50**	**12,217,000**
Balance		**33.83**	**87,465**

10) References.

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Appendix 1: Historic records of Blue Swallows

SPE_NAME	GENUS	SPECIES	REC_CODE	DD	MM	YYYY	SURNAME	PLACE
Blue Swallow	Hirundo	atrocaerulea	BI/0000/172/11	0	0	0	Carswell	QSD 11B
Blue Swallow	Hirundo	atrocaerulea	BI/0000/172/12	0	0	0	Carswell	QSD 48A
Blue Swallow	Hirundo	atrocaerulea	BI/0000/172/13	0	0	0	Carswell	QSD 46C
Blue Swallow	Hirundo	atrocaerulea	BI/0000/172/14	0	0	0	Carswell	QSD 46D
Blue Swallow	Hirundo	atrocaerulea	BI/0000/408/06	0	0	0	Carswell	QSD 55B
Blue Swallow	Hirundo	atrocaerulea	BI/1991/049/56	7	8	1991	Francis	Sango Bay
Blue Swallow	Hirundo	atrocaerulea	BI/1996/231/01	0	0	1996	Carswell	Apoka

Appendix 2: Conservation Action Plan for the Blue Swallow (*Hirundo atrocaerulae*)

Blue Swallow (*Hirundo atrocaerulae*) is a globally threatened species categorized as Vulnerable (rapid decline of >20% of the population in 10 years if conservation measure are not put in place). The East African population is classified as Endangered (rapid decline of >50% in 10 years) under the EA regional red data list.
Sango Bay area is an Important Bird Area (IBA), identified because of its importance to the conservation of globally threatened species, Lake Victoria biome species and Guinea Congo biome species. An inventory of Blue Swallows in Uganda indicated over 550 individuals of which 232 were observed in Sango bay area (SBA), and another 215 recorded in Nabugabo area. This implies that SBA is the most important for the species in Uganda. Another area where a significant number of Blue Swallows have been recorded in Uganda is Mabamda wetland, also an IBA. Sango bay area is therefore the only area in Uganda where a significant number of Blue swallows have been recorded in a gazetted area (Forest Reserve). Locations where the Blue swallows haven recorded are indicated on the map (numbers shown by gradation of the circles). The UWA has proposed the species as one of the protected species in Uganda.
Blue Swallows occur in the seasonally flooded grasslands and Sango is probably the major non-breeding area of this species across its range i.e. east, central and southern Africa. It breeds in Southern Africa in September and migrates to the non-breeding areas (such as Uganda) in August. The habitat requirements of the Blue Swallow is a combination of grassland areas interspersed with drainage lines in gullies and valleys, and wetlands systems such as pans and water ponds or dams.
Baseline information is available at ***Nature***Uganda (Evans and Byaruhanga 2002, Byaruhanga *et al* 2001) and an International Conservation Action Plan for the species has been produced (Evans *et al* (ed.) 2002) which provides strategies and actions for the conservation of the species across its range.

Based on the above background information, the following actions will be undertaken to conserve Blue Swallows in Uganda and specifically in Sango Bay.

- Sango bay is an Important Bird Area (IBA) and appropriate conservation efforts, (Important Bird Areas Conservation Strategy) as applied to the IBAs will be implemented
- Assess the distribution and habitat requirements of Blue Swallow, the population size and identify key sites in the area. An inventory of the species will undertaken at all known and potential sites and regular counts (monitoring) of the birds during the migration period (April-October) will be undertaken at selected sites. During the inventory, appropriate habitats for the species will be identified.
- Identify any human activities that lead or may lead to habitat destruction at key sites
- An investigation of the methods of mark-recapture to establish the link between breeding, migratory, and non-breeding areas is planned
- Design and implement a monitoring system for the species, habitat quality and extent of habitat (this could be ranger based)
- Improve the profile of the Blue Swallow nationally and locally in partnership with other agencies and local communities.
- A deliberate effort will be made to encourage undertaking of EIA before any land conversion is made where the species occurs including potential sites
- Blue swallow conservation will be integrated in other conservation and development activities to enhance timber production, tree planting and grazing.

The Blue Swallows in Sango bay occur in the grasslands and seasonally flooded areas. The integrated approach to the conservation of these habitats together with forest, in collaboration with local communities and other stakeholders will be emphasized in the implementation of these strategies and actions.