

Local Initiative for Conservation of Blue Swallow, *Hirundo atrocaerulea*, and its Habitat Range in Kenya

FINAL PROJECT REPORT

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Submitted to



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BACKGROUND

Blue Swallow *Hirundo atrocaerulea* is an intra-African migrant bird species with its range spanning ten African countries of which seven are its breeding range (South Africa, Swaziland, Zimbabwe, Mozambique, Malawi, Zambia and Tanzania) while it visits three countries (Uganda, Kenya and Democratic Republic of Congo) during its non-breeding season. The species is globally Vulnerable (BirdLife International 2012) and is classified as Endangered by the East African regional Red Data criteria (Bennun and Njoroge 1996). In Kenya, the species winters in western part of the country with its range in Ruma National Park, Mumias, Busia and Bungoma (Zimmerman *et al.* 1996). The species is described as rare in Kenya (Evan *et al.* 2002; Zimmerman *et al.* 1996) and was recorded at Ruma National Park and Busia Grasslands in Kenya's most recent survey done in 2003 (Ndang'ang'a 2007). This quick survey was an assessment of the current occurrence status of the Blue Swallow in several areas that constitute Busia grasslands.

While the potential and actual imperative of Blue Swallow includes ambassador of peace and source of partnerships in conflict prone African flyway, symbol and flagship species for the conservation of grassland and wetland habitats and ecosystems, local diet in Uganda and Kenya among others, the conservation of this species is faced with various threats. International Blue Swallow Action Plan (Evans *et al.*, 2002) enumerates habitat degradation and conversion, local hunting and specialized habitat requirements as some of the threats facing it continentally. The conservation profile of Blue Swallow in Kenya is low due to focus on megafauna and lack of multi-stakeholder and contextualized species action plan. This is despite deductible threats due to its occurrence in both protected and unprotected sites. Studies on the species are less though its scarcity makes it fascinating to birdwatchers, tourists and scientific researchers.

The population of the Blue Swallow is only well-known in South Africa and Swaziland. There are population estimates based on incomplete surveys for Zimbabwe, Malawi and Uganda. Population numbers have been guessed, based on the extent of apparently suitable habitat, in Mozambique, Zambia, DRC, Kenya and Tanzania (Evans *et al.*, 2002). There has been need to conduct actual survey of the population of this species in both its breeding and non-breeding ranges and involves local stakeholders in local conservation of the species. This project aimed to kick-start the foregoing by availing information on Blue Swallow population at non-breeding sites in Kenya while working with local communities to promote conservation of the species and its local habitats.

OBJECTIVES

This project conducted population surveys of the Blue Swallow in its Kenyan non-breeding sites, assessed local threats and build local community capacity through site conservation groups to promote local conservation of the species and its habitats.

Specific objectives

1. To investigate the populations of Blue Swallow in Kenyan non-breeding sites.
2. To assess the prevailing threats and local community perception on Blue Swallow populations and habitat in Kenyan non-breeding sites.
3. To establish site conservation groups in two identified Blue Swallow non-breeding sites to spearhead local conservation of the habitats and their unique flora and fauna.
4. To undertake capacity building and training for members of established Site Conservation Groups on IBA Management and Conservation.
5. To network the established site conservation groups with national Important Bird Area (IBA) programme being run by Nature Kenya and Birdlife International, Africa Region.

KEY PROJECT ACTIVITIES UNDERTAKEN

POPULATION SURVEYS OF THE BLUE SWALLOW

Objective: To investigate the populations of Blue Swallow in Kenyan non-breeding sites. Ecological surveys to assess the current population status of the threatened Blue Swallow were conducted in its Kenyan wintering grounds in both Ruma National Park and Busia Grasslands IBAs.

RUMA NATIONAL PARK

Ruma National Park is a designated IBA number 40 in Suba District of Nyanza Province. Its central co-ordinates are 0°35'S, 34°12'E, at an altitude of between 1,200–1,600 m above sea level (Bennun & Njoroge 1999). The Park lies on the flat floor of the Lambwe valley, bordered by the Kanyamwa escarpment (and including a section of Lambwe Hills Forest Reserve) to the south-east. The terrain is mainly rolling grassland, with tracts of open woodland and thickets dominated by species of Acacia and Balanites. The soils are largely 'black cotton' clay. The surroundings area is settled, with a mix of small-scale cultivation and grassy pasture-land (Bennun & Njoroge 1999). Ruma is the only protected area in Kenya where

the Blue Swallow, a scarce intra-African migrant, is regularly recorded (Bennun & Njoroge 1999) where it utilizes the ideal seasonally flooded grasslands at the site.

We conducted intensive surveys towards end July 2012, each day starting at 0900hr to 1700hr. Two major transects with different land use intensity according to the map we obtained from KWS Ruma Station were surveyed for comparison. These were surveyed on the first and second days respectively. Transect 1 that measured approximately 12km was from the forking from Kamato gate- Lambwe Airstrip junction-Nyatoto gate. This transect lay in the low land use zone. Transect 2, also 12km long was from the forking from Kamato gate-Wiga (Old) airstrip-Wiga base was located in the high land use zone. The land use hence transect categorization was according to KWS Zonation map.

Opportunistic observations and total counts were employed to collect data on presence, distribution and behaviour of the target species. We drove at an average speed of 20km/hr with two observers, one at the front passenger seat and one at back-right seat on alert and making occasional stopovers where swifts and swallows were observed. On the second day, we were not able to reach Wiga gate because of road repair works and also impassable section at the proposed Got Rabondo picnic site junction. Our reverse route survey ended at Wiga airstrip where we used the airstrip bypass to get to the Lambwe airstrip-Nyatoto gate transect and surveying this latter section again. We surveyed an 8km public road section on the periphery of the park from Nyatoto gate-Nyadenda outpost. We then returned to the main Kamato gate – Nyadenda gate route for a quick survey of the sites where we had observed the Blue Swallows.

A cumulative count of 87 Blue swallows were observed and counted during the 2 survey days. We however believe that the mean of 43 birds were encountered during the survey. This was obtained from individual day's means where the first survey day had 11 while the second day had 32 birds; or directly averaging the cumulative number, 87 for the 2 survey days. The birds observed on the first day may have been counted again on the second day hence going by the average figure for the 2 survey days. The Blue Swallows were encountered at the same 2 localities, 1 kilometre apart from each other on the first transect and at about the same time on

both days of the surveys. No Blue Swallows were encountered on the second transect that was classified as high land use zone by the KWS.

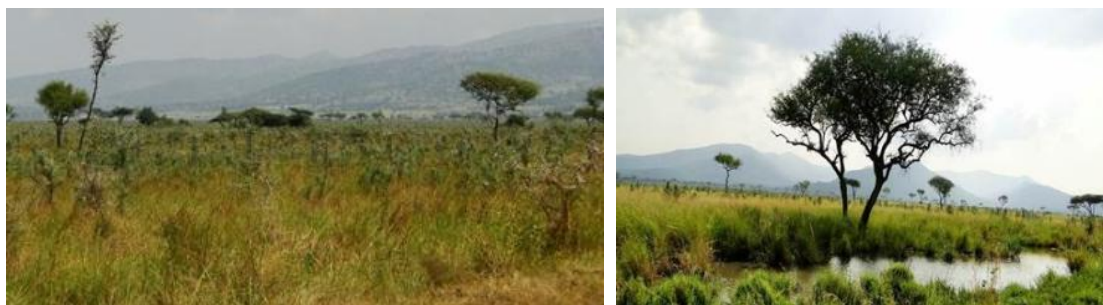
The habitat at the first site where Blue Swallows were observed was mostly constituted of grasslands about 1m tall on the average. The woodland habitat was constituted of *Acacia drepanolobium* shrubs of average height of about 2m and estimated density of 1 *A. drepanolobium* shrub per m² with a few *Balanites aegyptica* trees of which only 7 were counted within about 150m radius that we could positively identify the Blue Swallows. There was no obvious flooding or pools of water at this site. The second site where Blue Swallows were observed was constituted of longer grasslands almost the same height as the 2m shrubs of interspersed *Acacia drepanolobium*. There were also more *Balanites aegyptica* of which 12 trees were counted within the 150m observation radius. Pools of stagnant water were also observed at this site, two of which were adjacent to the park road and an apparent dry stream bed stretching eastwards.

Blue swallows were observed to be flying or perched either on the plants (bare terminal parts of *Acacia drepanolobium* only) or on the bare ground on the road. At the second site, Blue Swallows were in addition seen to be drinking water on the shallow roadside pools. The flying Blue Swallows were observed to occur in a transient manner whereby there were moments of absence when the entire flock would move from east to west and vice versa but still coming back to the site i.e. moving to and fro along but within a certain stretch of the site. The flying Blue Swallows were further observed in stratified association with other swallows and swifts. The Blue Swallows seemed to be the lowest flying at a height of under 15m but mostly just overflying the 2m tall *Acacia drepanolobium*. Other species seen together with the Blue Swallow included Barn Swallow (*Hirundo rustica*), Angola Swallow (*Hirundo angolensis*), Mosque Swallow (*Cecropis senegalensis*), Rufous-chested Swallow (*Cecropis semirufa*) Little Swift (*Apus affinis*) and Nyanza Swift (*Apus niansae*). On the second day of the survey Madagascar Bee-eaters (*Merops superciliosus*) were also seen foraging at the first site (nearest to Kamato gate forking) where the Blue Swallows were observed.



Observed Blue Swallows of various age-groups. *Photo: M. Odino*

The actual sites where the Blue Swallows were observed were somewhat centrally located in the park with the topography of the region being predominantly gently rolling. The distance between the 2 major park gates, Kamato and Nyatoto is 14km. The species distribution at the centre of the park may therefore suggest probable preference to minimal or no human disturbance by the bird at the wintering site. The High Land Use transect where no Blue Swallows were encountered is located proximal and running parallel to the southerly border fence of the park. This zone is gently rolling at the foothill of Lambwe Hills and was said to have been fenced off more recently compared to the rest of the park. The area was therefore last to be liberated from human activities inclusive of grazing, firewood collection and poaching (R. Oywer pers. comm.).



Sites 1 and 2 where Blue Swallows were observed. *Photo: M. Odino*

In the second transect where no blue swallows were observed, the habitat was constituted of a 2 km stretch of grassland and woodland (mostly *Acacia drepanolobium*) recovering from fire while the rest was predominantly 2-3meter tall grass and more wooded with *Balanites aegyptica*, *Acacia xanthophloea* and *Acacia drepanolobium*. The latter 2 species of woodland vegetation were also much taller in this transect than transect 1. Majority of both were between 3m to 15 meters tall. Transect 2 was also more continuously swampy than transect 1 with the swampy ground being soggy wet or where there were pools, these were closely disrupted by thick vegetation. It is therefore likely that the Blue Swallows prefer the shorter vegetation habitat because they are habitual, low flyers. This could further suggest that the swallows hunt lower flying insects, generally just above the 2m tall vegetation. It is also likely that the Blue Swallows seen to be highly mobile to and fro within the site at low height in generally unidirectional waves need more open habitat rather than many tall trees which would disrupt the straight, low level flight. The recurrence by the Blue Swallows at these sites in the short moments of presence and absence as well as being encountered at the same sites during the 2 survey days suggests faithfulness to these sites hence the reason why we used the mean of their observed numbers. The open pools in transect 1 seem to have been watering points as the Blue Swallows as well as Barn Swallows were seen to swoop just above the water surface drinking while in flight.

Stratified association of the Blue Swallows with other swallows and swifts may further support the tendency to forage on lower flying insects compared to the other swifts and swallows that were observed flying up to over 50meters high.

Blue Swallows also perched at a height of 1-2meters on bare *A. drepanolobium* aerial twigs further suggesting tendency to preference to low height. Perched birds were relaxed and no apparent activity associated with the perching was observed. This shrub-perching behaviour seemed predominant in the late afternoon than late morning into the early afternoon during which times the surveys were conducted. Only one Blue Swallow was observed to be perched

at 1215hrs while 2 and 6 Swallows were seen perched at 1530hrs and 1640hrs. This may suggest that the earlier time perching corresponded to random resting which was not seen of many birds as earlier times of the day are characteristic predominant feeding times and many birds will not break or rest until they are well fed. The late afternoon or evening perching may have suggested roosting by the birds therefore the second site was a possible roosting site. This is however not conclusive as we were not able to observe the birds late into the evening. However, while we stayed late (up to 1900hrs) in the park on the last day following vehicle breakdown, there was rain and thunderstorm that may have affected the birds variously. A unique behaviour of shrub-perching by the Blue Swallows was that the birds returned to the same plants even after they were flushed. This was observed of the birds as one of the survey participants, M. Odino attempted to photograph the birds. Again this perch faithfulness may suggest that we saw the same birds on the two different days hence justifying the mean of their numbers as the actual number of observed birds during the survey days.

Blue Swallows were further observed to perch on the ground on the earth road in the park in the late morning and early afternoon while none was observed in the early evening. Ground perching was associated with preening. This behaviour was observed of the Rufous-chested Swallow as well that associated with the Blue Swallows. This may have been as a result of instability in perching on the twigs of woody plants hence preference to groom on the ground which is associated with a lot of body twisting movements as opposed to the dormant state when perched on shrubs. Disturbed ground-perched grooming birds kept moving to a seeming safe distance where they would perch again and the birds did not necessarily return to the previous points. The ground may therefore purely serve as stable perch for the birds with no other apparent reason for ground perching.

Overview of reconnaissance visits at Ruma

We organized visits to the surrounding market centres to get an overview of local population and their perceptions of the Park. These included Kodumba, Ogongo and Nyatoto. We encountered no community tour guides and no local conservation group. We purchased the Ruma National Park Official Guide Book for use in the Park then toured the park and discovered

its suitable moist grassland habitats for the Blue Swallow. The Park is an open grassland area interspersed with *Acacia drepanolobian* and *Balanites aegyptica* trees.

Meeting with local provincial administration and community at Ruma

Our team was informed that there are many women groups locally but none is involved in conservation or environmental issues. The participants saw the need to form a local group to be engaged in species and habitat conservation. According to local community, other areas the group could be involved in included tree planting and grassland regeneration to curb soil erosion. They suggested that the group when formed could be a special CBO for monitoring and conservation. The community discussed amongst themselves the probable interim group leaders who were presented to us during the next activity visit at Ruma. The following is the list of moist grassland areas found in the Ruma NP buffer zone area:

- | | | |
|-------------|-----------|---------|
| • Saka ooro | • Kariaga | • Obere |
| • Wangapala | • Nyarori | • Rongo |
| • Alendo | • Andiwo | • Ochol |

Community challenges at Ruma NP

- There is very little involvement of local community in conservation and management activities at Ruma NP.
- Poor park accessibility due to poor access road network around the park.
- The communities have not been sensitized and are not aware of how they can be involved in conservation.
- Poor local and political governance in resource allocation.

Discussions with KWS Ruma NP Warden in charge

- There is no specific conservation programme for birds at Ruma NP unlike the big game.
- There are 400 species of birds recorded in the Park mostly by visiting birdwatchers. There is need to diversify the park's attraction to birds.
- The park encourages people to set aside land to form a community conservancy.
- Some people have wildlife in their farms e.g. near Koduma market.
- The park has employed a few community members as scouts.
- Roads in the park and major roads leading to the park are maintained by KWS.
- Local youths are interested in ecotourism activities but the programme has not yet picked up.

BUSIA GRASSLANDS

The Blue Swallows survey in Busia was conducted at Matayos (Sio River bridge), Nambale (at Sio River Bridge) and at Kisoko (the late. Mzee Lino's farm). These areas had characteristic riverine grasslands, sedges and reeds. We conducted opportunistic

observations both on foot and on motorbike along remote transects at the study sites starting about 0800hrs up to 1600hrs on 28th June 2012 and 29th June 2012. We observed in detail for any foraging swallows on the wing as well as perched on riverine vegetation and electricity lines. We remained vigilant even while crossing between sites and stopped wherever necessary to examine foraging and perched swallows. In addition, we asked locals showing them images of the bird if they had ever seen them and during what times of the year.

There were no Blue Swallows observed at the surveyed sites. These surveyed sites were mostly observed to be fragmented and interrupted by sections of mostly maize crop farms showing the current levels of human disturbance to Blue Swallow habitats mainly through encroachment.



Riverine grassland at Sio River at Matayos encroached by maize farming in the background

Many people (inclusive of our 2 assistants) did not know about the Blue Swallows at Matayos and Nambale. Two people at Kisoko however knew about the birds. One (Kizito Muyodi) of these was a son of the landowner where we went surveying for the birds while the other person (Pascal Oduori) was an enthusiast from around Kisoko. Information obtained from the two knowledgeable informants included the fact that Blue Swallows arrival coincides with the onset of the flying season of the (edible) winged termites, *Macrotermes subhyllanus* (P. Oduori pers. comm.; K. Muyodi pers. comm.). The Blue Swallows occurred in mixed flocks alongside the locally common swallows, notably the Lesser Striped Swallow, *Cecropis abyssinica* and the Angola Swallow, *Hirundo angolensis* (K. Muyodi pers. comm.) Blue Swallows in many years were observed to be abundant in August and early September however this was dependent on the availability of the winged termites which are mostly in season during the two months but sometimes even earlier (K. Muyodi pers. comm.). It was therefore possible to find the Blue

Swallows in June or July although they would be in small numbers compared to August and September (K. Muyodi pers. comm.).

Additional field activities conducted in Busia

Two field and local consultative visits were made in Busia. During these visits, we conducted surveys at the sites and held discussions with local inhabitants to record habitat threats and status. Locally, the Blue Swallow is called “Opicho” in Luhya language. Local presence of the species is varied at least according to the local inhabitants, some of whom indicated that the species is sometimes seen locally around August to November while a majority of the interviewees indicated that the species is regularly seen between April to September.

Some of the key threats to Blue Swallow and its moist grassland habitats were noted during these visits. Encroachment of grassland areas for various economic activities was evident and what used to be grassland areas have either been settled by people or partly used for agricultural activities e.g. subsistence farming, and commercial sugarcane production. This was the case at Kiseka (Mzee Linus farm), a grassland patch area where the Blue Swallow has been seen regularly by the local people. The increasing human population around the grassland patches also poses a clear challenge for conservation of moist grassland patches at the site. Other six grassland patch areas visited i.e. Mungatsi, Matayos, Walawatsi River, Musokoto, Sikoma and Malanga were also faced with similar challenges. The local inhabitants including the members of BECEP blamed the degradation of moist grassland habitats on changing rain and weather patterns a situation that has been experienced of late. This coupled with the increasing human population has resulted in unsustainable use of grassland patches in Busia.

ESTABLISHMENT OF SITE CONSERVATION GROUPS IN RUMA NP AND BUSIA

Objective: To establish site conservation groups in two identified Blue Swallow non-breeding sites to spearhead local conservation of the habitats and their unique flora and fauna.

There is already an existing local site conservation group (SCG) at Busia called Busia Environmental Conservation and Education Programme (BECEP) or Nature Busia. We involved BECEP members actively in our activities in Busia where they mobilized the local community for the success of this project. The chairman of BECEP, Edwin Agola and Douglas the vice chair acted as our field assistants for the project activities in Busia. The group is registered locally and is composed of 31 members: 18 females, 13 males. Prior to this project, the group had received no training to build their capacity in conservation and monitoring. This created an opportunity for the project since capacity building on IBA conservation and management was a key project activity.

In Ruma, we sensitized the local community and KWS staff through a training workshop that led to the formation of the Ruma Site Conservation Group. The group is currently undergoing legal registration

process with the Ministry of Gender and Culture. The following are examples of key thematic areas that were used for common discussions for formation of the group in Ruma:



Members of the newly-formed Ruma Site Conservation Group conducting bird identification at Ruma.

Formation of Site Conservation Group in Ruma

Why form groups?

- To share common ideologies/ideas
- Improve team spirit
- Come together to solve common problems.

Four issues that identify groups are:

- Vision – dream or broad goal where a group intends to go
- Mission – the driving factor that is used to achieve a vision
- Objectives - what a group intends to achieve within its mission. Objectives should be SMART
- Activities – what the group does daily, monthly, e.t.c to achieve the objectives

Establishment of SCG for Ruma: some relevant questions

- Is Ruma area important for biodiversity?
- Can the Ruma NP resources deliver sustainable improvements to livelihoods?
- Is there a strong voluntary spirit within the community at Ruma NP and its environs?
- Is there willingness of people to work together in Ruma area?
- Are local people interested in the conservation and management of natural resources?
- Can the SCG make a real difference to biodiversity conservation locally?
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Why establish a SCG at Ruma?

- Promote conservation of Ruma NP IBA and its buffer zone through biodiversity monitoring/IBA scouting e.g. habitat, how many birds seen/heard, threats water quality, etc

- Understanding of locally available natural resources
- Link local communities with national institutions e.g. KWS, NGOs, government agencies and researchers
- Networking for exchange of experience and skills e.g. through Ecofinder Kenya, Nature Kenya etc
- Local livelihoods: ecotourism promotion e.g. tour guiding, bird watching, wildlife counts, etc.
- Provide entry point for building local capacity for biodiversity conservation and monitoring.
- Empower and create local community awareness to develop self confidence, participate in and benefit from their natural resources.

LOCAL COMMUNITY PERCEPTIONS AND THREATS TO CONSERVATION

Objective: To assess the prevailing threats and local community perception on Blue Swallow populations and habitat in Kenyan non-breeding sites.

We conducted focus group discussions (FGD) among local stakeholders in Busia Grasslands IBA to assess their perceptions and attitudes towards conservation of the Blue Swallow in Busia. The FGD mainly targeted private landowners whose property the Blue Swallows use as their non-breeding or wintering grounds in Busia.

There were three main objectives of the FGD. We sub-divided the main objectives into various themes or points of discussion to capture all relevant information:

1. To assess local knowledge on the presence of Blue Swallow and possible reasons for its hunting
 - a) Knowledge about the presence of Blue Swallow locally
 - b) Economic/social role played by Blue Swallow locally
 - c) Local hunting for Blue Swallow
2. To assess the local threats to Blue Swallow moist grassland habitats
 - a) Causes of grassland clearing
 - b) Reasons for drainage of wetlands
3. To understand local perceptions/attitudes and alternatives for local conservation
 - a) Natural resources gotten from grassland areas
 - b) Need for grasslands conservation
 - c) Alternative economic activities
 - d) Sale of land for conservation
 - e) Opinion on what should be done to promote conservation

For each of the thematic areas/points of discussion, various probe questions were prepared to guide the group discussions. The original guide was reviewed to eliminate irrelevant probe questions. We used the guide questions below during the discussions:

1. Are you aware of wildlife conservation?
2. What are your feelings about conservation of birds?
3. Do you know of birds called Blue Swallow?
4. Does Blue Swallow play any role among the people in this area?
5. Do you hunt or trap Blue Swallows here?
6. Why do you hunt them?
7. What is the economic/social importance of Blue Swallow in this area?
8. What are the causes of clearing grasslands and draining wetlands in this area?
9. Are you aware of the role of grasslands here?
10. What are the most important natural resources that your family gets from the grasslands?
11. Do you think the grasslands should be conserved?
12. What has prevented people from your village from conserving the grasslands?
13. What alternative economic activities do you think can promote conservation of the grasslands?
14. Given alternatives, are you willing to sell part/whole of your land for conservation of birds?
15. What should be done to protect the grasslands in Busia?

We divided the participants drawn from various localities within the IBA representing the many grassland patches in Busia into three groups each comprising members of three age groups: 20 years and below, 20 – 40 years and more than 40 years. Three facilitators from the local community were sought who are also members of a local conservation group, Busia Environmental Conservation and Education Programme (BECEP). The facilitators chosen were sensitive to local conservation, cultural issues, polite and had interest of local people. Three other research team members performed tasks as rapporteurs/logisticians for each of the groups. Before the start of the FGD in each group, background information was obtained from the participants including age, sex, village, crops grown and farm sizes. This followed a brief introductory explanation to the participants on the purpose and scope of the discussions. The actual discussion followed the structured probe questions prepared previously on the major themes/points of discussion. The participants were given equal opportunity for participation.



A section of landowners led by Project Co-ordinator (standing) taking part in focus group discussion in Busia

A total of 34 participants participated in the focus group discussions. Out of these the group of 20 years and below had 11 members (6 male, 5 female); 20 – 40 years (11; 7 male, 4 female); and more than 40 years (12; 6 females, 6 males). Community members who participated in the FGD were carefully selected to give a desired representation of the moist grassland patches across Busia.

The facilitators used various moderating techniques to facilitate their groups. These included among others stimulation of participants to talk to each other and to the facilitator; paying close attention to what the participants said; encouraging shy participants to participate; careful in-depth probing to avoid aiding the participants in their responses; and discouraging domination of the discussion by more dominant participants. The rapporteurs recorded answers to the probe questions for each age group. While we did not use all the guide questions for discussion analysis, answers during discussion were reviewed and used for discussion in this paper.

All participants were aware of the presence of the Blue Swallow in Busia. Although there are many swallow species present within the Busia Grasslands IBA according to them, majority of the participants were able to describe the species and identify it with its local name, Opicho. They mentioned that the species is seasonal and were present in plenty in July and August yearly. According to the participants, the Blue Swallow plays a crucial role locally. When asked about the key roles played by the species, all the three groups mentioned the species as a source of food locally. Apart from being used as source of food, two groups mentioned two other roles of the species locally: indicate the presence of termites (20-40 years) and income from sale to local people (more than 40 years). This shows that the Blue Swallow and other hirundines have an economic value locally since they contribute partially to food security and

income generation at a seasonal level. The participants confirmed that the species is hunted locally mainly for these two reasons i.e. for food and for sale. The species may not be targeted solely for hunting but this may include other species in the same hirundine family necessitating implementation of a conservation approach that can promote the protection of all hirundine species from wanton hunting in Busia.

The three focus groups were in agreement that sugarcane cultivation was the key threat facing the Blue Swallow habitats in Busia Grasslands. This was the result of the presence of sugar milling companies and their sugarcane collection centres around Busia. Sugarcane is the main local cash crop for the local communities hence its production is locally promoted by sugar companies. Other threats to the species and its habitats mentioned and emanating from socio-economic activities included among others overgrazing by livestock, subsistence farming, human settlement and grassland fires in that order. These threats if not well responded to may pose great danger to the diminishing grassland habitats of the Blue Swallow and further threaten its already small population. For example, while sugarcane cultivation is being promoted in privately owned lands subsistence farming is practiced to fill in the food basket on the areas unoccupied by sugarcane. Seasonal threats like grassland fires may further destroy the uncultivated grassland areas as human population increases. Private landowners should be supported and encouraged to seek alternative livelihoods that is commensurate with their earnings from sugarcane production to avoid further loss of these grassland areas.

All participants were aware of the role of grasslands. The participants mentioned the most important natural resources gotten from moist grassland areas as land for farming, grazing area for livestock, grass for thatching traditional huts and provision of water for drinking. There was a general agreement from all the three groups that the grasslands in Busia IBA should be protected from anthropogenic damage. But when asked about what has prevented the people from conserving the grasslands in Busia, the group of 20 years and below mentioned widespread poverty as the main reason while 20-40 years group mentioned lack of awareness, widespread poverty, lack of alternative livelihoods, land ownership issues and local conflicts. The more than 40 years group indicated that lack of awareness, widespread poverty and population increase are the main reasons why local people have failed to conserve the wetlands. From the discussions, it was clear that although there is widespread poverty within Busia awareness creation on the need for conservation and alternative livelihood sources is critical to helping these communities realize their potential on other income generating activities. If not handled carefully, human population increase may cause more resource ownership conflicts in the near future and hence create hostilities to grassland conservation or habitat protection approaches in Busia.

There was little variation on the alternative livelihood sources among participants in the three groups. When asked about these alternative livelihoods in order of priority, 20 years and below and 20-40 years groups prioritized fish farming followed by dairy cattle/zero grazing, ecotourism, agro-forestry and bee-keeping while the more than 40 years group prioritized dairy cattle/zero grazing followed by agroforestry then small scale irrigation/horticulture, fish farming, bee-keeping and ecotourism. This could be attributed to the fact that the older generation tend to prefer economic activities that require less energy and time engagement as opposed to the much younger generation that view new forms of farming as more lucrative. But it remains clear from the discussions that there is an urgent need for alternative livelihoods among the locals that can make them realize their potential and match the resources used in these activities to economic output. Fish farming and dairy cattle are the key alternative livelihoods common to the three groups hence their promotion locally should be emphasized.

Willingness to sell land was discussed at length among the participants in the three groups. When asked about their willingness to sell part or whole of their land to promote local conservation of grasslands, approximately 80% of the individual participants accepted the idea voluntarily. All the participants up to 40 years of age accepted while there were some reservations for those aged more than 40 years. The 20% participants (more than 40 years) who had reservations mentioned the need for stakeholder education especially private landowners to understand the concept and the need for conservation. Again, they suggested that with provision of alternative livelihoods they were willing to sell part of their land to an organization that will promote conservation locally and compensate them for their land. Traditional norms that relate to land could have played a role here especially among the participants above 40 years who have a lot of value attached to land. However, with adequate public awareness and promotion of conservation with alternative livelihoods, land purchase for conservation of the Blue Swallow and its habitats in Busia is possible.

When asked about what should be done to protect the grasslands from further destruction, 20 years and below group mentioned promotion of alternative income generating activities to local people, strengthening local groups to create awareness and fence off grassland areas. 20-40 years group mentioned alternative livelihoods, community policing, offer employment opportunities and promote ecotourism while more than 40 years group mentioned local awareness creation through public education. The opinion on conservation of Blue Swallow and its habitats revolves around awareness creation, alternative livelihoods and grasslands protection.

LOCAL CAPACITY BUILDING AND COMMUNITY TRAINING WORKSHOPS

Objective: To undertake capacity building and training for members of established Site Conservation Groups on IBA Management and Conservation.

Capacity building and training workshop was conducted at the Ruma National Park. The official key note speech was delivered by the KWS Warden Representative, Mr. George Morara. George is a tour guide and is specialized in environmental education. He thanked the project team for the conservation initiative to save the rare globally threatened Blue Swallow at the little-known National Park. He stressed the need to be engaged in environmental conservation because our future is dependent on the status of the Environment. He reiterated that it is the policy of KWS to create opportunities that allow communities to be involved in conservation of their resources. However, the local communities at Ruma have not been fully engaged in Park management issues due to lack of sensitization and awareness. Mr. Morara emphasized that the local community should benefit from the park and should work in collaboration with KWS.

The participants were asked to spread the gospel that conservation is a collective responsibility between various stakeholders including the government and local communities. While officially opening the training workshop, the Warden Representative welcomed all participants to the Ruma KWS headquarters and urged everyone to feel free at any moment.

The workshop covered various thematic areas facilitated by the project co-ordinator. These included among others:

Introduction to Basic Ornithology and Birdwatching

- Ornithology is a branch of Zoology concerned with the scientific study of birds.
- Birds display wide range of sizes, colour and habit.
- They live in every continent and occupy almost every habitat
- About 9,000 species of birds in the world
- Kenya has 1,100 bird species.
- Kenya has diverse habitats where birds are adapted to live: mountain forests, moorland, savanna, desert, coastal scrub, wetlands, etc.

Why study/use birds?

- They are widespread
- They are diverse
- Excellent environmental indicators: sensitive to changes in the environment
- They are easy to survey
- They have the aesthetic appeal and many people watch them as a sport/for fun
- We know more about them than about other organisms
- Indicators of biodiversity richness in other animals and plant groups

Birdwatcher's equipment

- Binoculars – have a magnification of 7-10x and a front lens of 30-40mm.
- Field guides
- Notebook
- Pencil
- Clothing – colour should be soft and dull
- It is also important to move quietly and unobtrusively while birdwatching or conducting bird surveys.

Field identification of birds

Bird sightings

- How big the bird is: compare with common ones e.g. is it larger than wagtail, etc.
- The bill shape, size and colour e.g. bill shape shows what the bird eats and its family
- The bird's shape: e.g. long tail like wagtail; crowned head like crane, etc.
- What is the bird doing: walking/hopping; peck at a tree-woodpecker etc.
- What habitat is the bird in, where is it within the habitat?

Using voice

- Contact calls: short and simple-communication between same species
- Alarm calls: warn other birds of presence of danger

Interactive discussion: Threats to Blue Swallow outside the Ruma National Park

Question: mention the local land-use practices that are a threat to birds/wildlife, wetlands and grassland areas

Result from participants: Summary of answers given

- Overgrazing
- grassland burning
- grassland harvesting for thatching traditional huts
- draining of wetlands
- Human settlements
- birds/wildlife hunting
- dense human population
- subsistence agriculture
- sugarcane farming

Participatory Assessment of Local Birds and their Values

Group Exercise:

Divide the participants into four groups. Ask the participants to mention all the birds they know (*including in local names*). List the functions/roles of birds locally. Categorize the functions/roles the birds play into e.g. insect population control, food sources for humans etc. For each category, mention all the birds that are believed to play these roles/functions.



Group Discussion during Ruma Blue Swallow Site Conservation Training at Kenya Wildlife Service Centre

Summary of Group Work reports/results

Result I: List of local/common names of birds - These names tends to represent bird families rather than bird species. The locals are unable to identify birds up to species level but they generalize their names to represent specific families.

	Local name	Bird family/species common name
1	Magungugungu	Stork
2	Akuru	Dove
3	Osogo	Weaver
	Local name	Bird family/species common name
4	Kwaru	Spurfowl
5	Awendo	Guineafowl
6	Ogowang	Crane
7	Otenga	Kite
8	Dharia	
9	Teltel	Woodpecker
10	Agak	Starling
11	Opija	Swallow
12	Nyatao	Nightjar
13	Tula	Owl
14	Okolokola	

15	Nganga	Hadada Ibis
16	Onyinjo	Hammerkop
17	Kiliti	
18	Achuth	Hornbill
19	Ochinjo	Wagtail
20	Odhiedho	
21	Owich kongulo	
22	Otangle	
23	Ondiw	
24	Okusi	
25	Mire	
26	Oyundi	Firefinch
27	Atinga/ongoatinga	
28	Aluru	Quail
29	Ochimbo	Swallow
30	Ochol	Drongo
31	Atutu	Coucal

32	Ngilingili	Parrot
33	Nyanyodhi	Sunbird
34	Okune okune	Long-crested Eagle
35	Nyakwadha	
36	Andiengo	
37	Arumtidi	Ground Hornbill
38	Odiero	
39	Okok	Egret
40	Oseng oseng	
41	Mbuhu	
42	Oteko	

43	Kwogo	
44	Abang chieth	Swift
45	Oluru	Mousebird
46	Ochimbo	Blue Swallow
47	Oswerere	Long-tailed Starling
48	Atin atin	
49	Kek	
50	Hundhwe	
51	Osou	
52	Adiel	

Result II: Roles played by birds locally with corresponding local names

- Telling seasons: depicting rainfall e.g. opija, magungagunga, nyakwadha
- Inform of danger e.g. oluru, owich kongulo, ongo
- Reduction of pests
- Food – aluru, awendo, akuru
- Income i.e. increased revenue from tourists
- Used in research
- Give information on local time
- Feathers used for decoration/artwork
- Cleaning the environment through waste clearance e.g. dead animals etc
- Part of the food chain hence contribute to ecosystem balance
- Pollination – nyanyodhi, osogo
- Crop destruction – osogo, akuru, ngili, ongowang, agak, ongo, awendo, aluru, kware
- Chicken predation – otenga, olith,
- Taboo (bad omen) – owl, arumtidi, teltel
- Insects control – odiero, dharia, ng’ang’a, opija, ochol
- Food – oluru, aluru, kware, awendo, mire, okusi, oseng, popo
- Medicinal value i.e. used by local herbalists – hundhwe, odo, atutu, apodo, nyatao, tula, teltel, akuru
- Fish predation

IBA Concept and Criteria

- IBA- Important Bird Areas
- IBAs are sites of global conservation importance identified using standard internationally agreed criteria. IBAs are practical tools for conservation and the IBA process uses birds to locate key sites for conservation across the globe.
- Sites of global biodiversity conservation importance are identified using the following criteria:

- Globally threatened species: Birds threatened with extinction (Critical, Endangered, Vulnerable, NT)
- Biome-restricted assemblages e.g. L. Victoria biome
- Restricted-range species/endemic bird areas: found nowhere else e.g. Sharpe's Longclaw-Kinangop
- Congregatory birds e.g. flamingos of L. Nakuru
- IBAs use avifauna it holds but their conservation would ensure conservation of corresponding taxa
- Thus IBAs are essentially Important Biodiversity Areas.
- Kenya has 61 designated IBA sites. Out of these, 35 are found within national protected area system i.e. forest reserves, national parks/reserves while the remainder are unprotected.
- The IBA network covers all Kenyan major habitats and around 10% of its land area.

Introduction to IBA Monitoring Programme in Kenya

- IBA monitoring programme in Kenya is co-ordinated by Nature Kenya (the East Africa Natural History Society), the BirdLife International partner in Kenya.
- The bulk of the technical work has since been carried out by Ornithology section of the National Museums of Kenya.
- Monitoring is done by local conservation groups i.e. site conservation/ support groups.
- Monitoring data are sent annually to Nature Kenya to produce a national report that is shared with BirdLife International Africa Partnership secretariat.
- Two types of monitoring: Basic and detailed Monitoring

OUTCOMES, CHALLENGES AND LESSONS LEARNT

OUTCOMES

This project has attempted to establish the population status of the rare and globally threatened Blue Swallow in local Kenyan non-breeding habitats. This has been done for the first time since the last study conducted in 2003 (Ndanganga 2007). Even though our team did not record the species in Busia, the surveys in Ruma National Park were largely successful, which allowed the counting of species numbers. Besides the Blue Swallow population surveys, this project also assessed the current threats to the species and habitats in its non-breeding range. Perspectives on conservation by the local people were also assessed through focus group discussions and semi-structured interviews. These will form a basis through which future studies will be conducted for the benefit of the species and habitats that it depends on for roosting and foraging while wintering in western Kenya. The project also led to the establishment of the Lake Victoria Birds Working Group (LVBWG), a Community Based Organisation that will spearhead future conservation activities in relation to birds and their habitats in the Lake Victoria region. Although LVBWG is still in its infant stage, it will co-ordinate

the activities of newly formed Ruma Site Conservation Group and Nature Busia (BECEP), the two local groups that worked closely with the project team in both Ruma and Busia respectively. Through this project, the established site conservation group in Ruma was trained on the basics of IBA monitoring and the role of birds in conservation. The formation of these institutions is a clear indication that conservation work in these IBAs will continue for the benefit of the species and habitats with strengthening of their capacity.

CHALLENGES & LESSONS LEARNT

In Busia, poor access road network within the grassland patches especially during rainy seasons affected our fieldwork. This called for the hire and use of a four wheel drive vehicle that is costly to hire in order to gain access since the grasslands are occasionally flooded. The grassland patches are situated several kilometers apart. This negatively affected our logistics arrangements and increased costs of fuel and long working hours. This coupled with poor road network proved that accessibility is a true challenge during field work activities especially in areas with poor infrastructure like Busia. This problem was not a major issue in Ruma National Park. However, there were few access roads within the park that limited our chances to count all the species in totality within the locations where the Blue Swallows were recorded.

Working closely with communities in targeted sites helped us realize most of our objectives. In Busia, we used members of Nature Busia (BECEP) as field assistants while in Ruma we used two local assistants and a KWS warden (for within Park security) to undertake our activities. These community members also acted as a direct link between us with the local administration and community leadership. This helped us gain a wider acceptance locally and eased our data collection process especially during focus group discussions and interviews with local stakeholders.

The training workshop and training in Ruma was an eye-opener to the local people and other participants. It introduced the IBA concept and the need for conservation of birds and other biodiversity locally. Our team learnt the need to involve local communities in such workshops because they shared their local experiences related to natural resource management and their traditional ecological knowledge in resource management. The involvement of the KWS management in the workshop helped define and harmonise their role and engagement with the local community in conservation of wildlife in Ruma NP. We suspect that equal representation in the leadership of the newly formed Ruma site conservation group will help the group manage leadership issues and reach consensus on management issues.

FUTURE WORK AND PROPOSED INTERVENTIONS

RUMA NP

1. Conduct annual Blue Swallow population surveys to determine population trends and its basic ecology during its non-breeding season in western Kenya.
2. Sensitize and empower the local communities to exploit the Park resources for local benefits.
3. Initiate learning exchange programme for adjacent communities with other communities who have succeeded in community-based management of natural resources near protected areas.
4. Promote social tourism through farming and community-based tourism e.g. hosting tourists in homesteads, building eco-cottages etc.
5. Improve local governance by building local capacity to promote natural resource management.
6. Integrate local domestication of birds e.g. Quails and Guinea-fowls with habitat preservation to minimize local bird hunting.
7. Train local youths to become community guides to support the capacity of KWS rangers in tour guiding.

BUSIA

1. Conduct intensive surveys covering all the Busia grassland patches to give actual population of Blue Swallows during its non-breeding season in Busia.
2. Work with local community to conduct annual Blue Swallow monitoring during its non-breeding season in western Kenya.
3. Survey the current extent and actual sizes of grassland areas to determine their rate of loss and current status.
4. Initiate alternative livelihood activities for the local community in Busia adjacent to the important grassland areas to minimize rate of grassland loss.
5. Purchase appropriate grassland patches that are strategically located and ecologically important for conservation targeting the Blue Swallow and other biodiversity.
6. Initiate conservation awareness activities including the involvement of schools and theatre

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FINANCIAL REPORT

Local exchange rate: 1GBP=KSh. 130

Item description	Amount	
	KSh.	GBP
Reconnaissance & Data sheets	8970	69
Bird Guide Books & Binoculars	56030	431
GPS	60060	462
Digital Camera	44980	346
Survey Assistants training	20020	154
Survey field mobility	166010	1277
SCGS mandate awareness forum	8060	62
SCGs governance & registration	3640	28
SCGs training hall	24050	185
SCGs training stationery	12350	95
Training LCD Projector	54990	423
SCGs training refreshment & meals	83590	643
SCGs training transport reimbursement	27170	209
SCGs training facilitators fees	30030	231
Project team monthly stipend	119990	923
Communication & co-ordination	24050	185
Reporting	11960	92
Monitoring & evaluation	24050	185
Totals	780000	6000