



## Blue Swallows (*Hirundo atrocaerulea*) conservation

### Report



Report by Shingirai Sakarombe



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## Project Team

Shingirai Sakarombe - **Team Leader, BirdLife Zimbabwe Youth member, Early career Conservationist**

Ronnie Chirimuta - **Chairperson BirdLife Zimbabwe Youth, Bird Expert**

Abigail Karimanzira – **Early Career Conservationist**

Kundai Dube - **Nyanga National Park Terrestrial Ecologist**

Linniwe Tsangamidzi - **Chimanimani Mountain Guide, an Emerging young birder**

Timothy Mudhluyi - **Chimanimani Lead Mountain and Bird guide**



Part of the Blue Swallow Survey Team



## Background

The Zimbabwe Parks and Wildlife Management Authority (ZPWMA) and BirdLife Zimbabwe (BLZ) have a working Memorandum of Understanding (MOU). BirdLife Zimbabwe (BLZ) was the leading agent in researching the vulnerable Blue Swallows (*Hirundo atrocaerulea*) both in and outside the Park. The Projects started in earnest in August 2020 and at its inception, was targeting both breeding and foraging sites of the Blue Swallows within Nyanga National Park. A follow up field survey was conducted from 21 – 26 March 2021. This report, therefore, provides an overview of the project activities, methods adopted, achievements and further areas of interventions to save the globally threatened Blue Swallows going forward. Many thanks to the African Bird Club (ABC) for providing funding for the activities carried out during the project life cycle.

## Introduction

The blue swallow *Hirundo atrocaerulea* is a globally threatened species endemic to sub-Saharan Africa (BirdLife International, 2013). It is an intra-African migrant whose range includes South Africa, the eastern highlands of Zimbabwe, north-eastern Zambia, Malawi, southern Tanzania, the south-eastern Democratic Republic of the Congo, Uganda and south-western Kenya (Evans & Barnes, 2000). The species is classified as Vulnerable on the IUCN Red List and listed in Appendix I and II of the Convention on the Conservation of Migratory Species of Wild Animals. The global conservation status of Blue Swallows has not changed for the past two decades despite significant changes in their habitat. In East Africa, Namibia and Zambia, the species have been classified as Endangered while in South Africa they are Critically Endangered. This is mainly attributed to the deteriorating habitat and decreasing populations in these particular areas.

In Zimbabwe, Blue Swallows breeds in the eastern Highlands which consists of a 260km long stretch of highland. The species is distributed southwards from the

Nyanga Highlands to the Chimanimani Mountains, though its southernmost range of the species is not well profiled and known. The largest breeding population in Zimbabwe is resident in the Nyanga Highlands; with an estimated 25% of the global population breeding there (Evans et al. 2002). this, therefore, makes Nyanga IBA an important area to focus on for the conservation of Blue Swallows.

## Project Objectives

The primary objectives of this project were;

- a) To establish the current population and distribution of Blue swallows (*Hirundo atrocaerulea*) breeding in Nyanga IBA and the surrounding areas.
- b) Assess nature and the extent of threats to the survival of Blue Swallows.
- c) Raise awareness and establish a monitoring network for Blue Swallows with a particular focus on areas outside Nyanga National Park.

## Project Area

A Nyanga highland is one of the twenty Important Bird and Biodiversity Areas (IBA) in Zimbabwe. The area extends from the montane forests on the slopes of the Nyangani mountain in the west to the lowland rainforests in the east in the Honde Valley.



Part of the area is mainly covered by the Nyanga National park which is 472 km<sup>2</sup>

(White, 2009) in size and was established in 1926. The vegetation of Nyanga Important Bird Area is part of the Eastern Zimbabwe montane forest-grassland mosaic (preferred habitat for blue swallows) and shrublands ecoregion. Rainforests are found mainly on the eastern slopes as well as in the steeper valleys on west-facing slopes. Nyanga area receives an average rainfall of 1236.7 mm per year. The area is mainly dominated by Mount Nyangani, which is the highest mountain peak in Zimbabwe. It lies in the centre of the park and graduates into several other mountain peaks exceeding 2000m altitude along with the Nyangani mountain range. Most of the area is underlain by granite rock although the mountain peaks are mainly composed of the Umkondo Group of dolerite and sandstone (White 2008). The study area is surrounded by forestry plantations, tea estates, and communal lands and is the most important area for Blue Swallows in Zimbabwe.

## Project Activities

### Blue Swallow Survey and Habitat Assessment



Abigail Karimanzira (BLZ) pointing towards a flock of Blue Swallows

## Methods

We surveyed the blue swallows in the Nyanga National park and the surrounding area. Data collection consisted of two rounds of surveys that we conducted in October 2020 and March 2021. We reviewed the literature to identify historical sightings of blue swallows in Nyanga and its surrounding areas. Using GPS coordinates from historical sightings, we visited all the areas where blue swallows were known to be nesting and foraging. Apart from visiting historical sites, new sites were also searched for the potential presents of the birds and nests. We picked sampling points randomly along access roads in the park while nests were searched in grassland patches taking advantage of the access roads that are within the National Park. In areas where there are no roads, walking transects



Abigail Karimanzira and Kundai Dube recording GPS coordinates during Blue Swallows field survey

were used. The number of birds seen or heard on either side of the point was then recorded on the standard datasheet. We also recorded habitat characteristics in areas where species were nesting or foraging to help characterise the preferred habitat of blue swallows and the associated threats.

## Survey results

Nyanga Mountains form the northernmost extension of the Eastern Highlands and Nyanga National Park lies along the Eastern border of Zimbabwe. The park is 440 km<sup>2</sup> in size and is surrounded by forestry plantations, tea estates, and communal



lands. The first survey was conducted in October 2020 and followed by another one in March 2021, to access nesting sites to estimate the breeding pairs as well. The research reviewed that most of the suitable habitat in the area has already been converted to pine and wattle plantations, settlement or being cultivated. The Nyanga area in general is suitable for growing fruits (apples, plums, apricots) and potato farming hence the Blue Swallow habitat continues to shrink. During the survey vast areas were observed to be under potato cultivation as evidenced by recent conversions of grassland to cultivated areas. The core area for the birds is mainly confined to Nyanga National Park and the prime area for the birds is Nyazengu, an area relatively free from pine and wattle. In the communal areas surrounding the IBA, a total of 52 individual birds were recorded.

The survey results indicated that a large proportion (54% in 2014 and 59% in 2020/21) of individual Blue Swallows are found in various parts of the Nyanga National Park (protected area) during their breeding season. A significant proportion (35% and 41% in 2014 and 2021 respectively) of the breeding population is found in commercial areas where the main land use is predominantly agriculture.

Survey Area	Land-use	2013/14 Survey Results	2020/21 Survey Results
Nyanga Downs	Potato Farms	30	37
Pfumarungu Farm	Potato Farm	18	11
Mutiro Farm	Potato Farm/ Plantations	1	-
Claremont Estate	Private Land	6	14
World's View – Connemara	Private Residence	-	4
Gairezi/Little Nyangani Mt	Protected Area	2	6
Kwaraguza Rd	Private Residence/Protected	-	6
Magadzire Primary School	Communal Area	-	2
Udu Camp, Nyanga District Heroes Acre and Troutbeck Turn-off	Protected Area	16	21



Nyazengu	Protected Area	9	-
Chawomera Fort	Protected Area	8	7
Circular Rd, Nyamuzihwa and Nyamunhambo	Protected Area	27	41
Nyanga Power Station Grid	Protected Area	1	1
Kanjakwe Area	Protected Area	17	7
Pungwe Ridge	Protected Area	4	6
Erin Forest	Wattle/Pine Plantations	10	2
Sanyatwe	Communal Area	7	-
Total		156	165

### Other species findings

The survey was not limited to Blue Swallows only but included other bird species recorded along the way. Nyanga area is known the world over as an Important Bird and Biodiversity Area. Major highlights of the recorded species include Wailing Cisticola, Olive Bushrike, White-chested Cuckoo-shrike, Red Bishop, Yellow-mantled Widowbird, Malachite Sunbird, Klass's Cuckoo, Red-chested Cuckoo, Verreaux's Eagle, and Wahlberg's Eagle among other special species.

### Community engagement

We conducted a community awareness and education workshop partnering with the Nyanga National Park Extension Officer, Mr J Mashava. However, before community engagements, the thrust involved the engagement of key stakeholders to highlight the objectives of the project, its background and plans going forward.

### Courtesy to District Development Coordinator (DDC) Nyanga

We first met the District Development Coordinator for Nyanga. To the DDC, we highlighted the key objectives of BLZ and the knowledge gap in terms of bird and wildlife awareness in communities. We further highlighted our project intentions to get into communities to carry out surveys and raise awareness on the plight of the

Blue Swallows and biodiversity in general given the current climate crisis we are facing as a country. The DDC highlighted the need for BLZ to enter into an MOU with Nyanga Rural District Council and requested timely updates of such research works for filing by the District Economists' Office.

#### Meeting with District Schools Inspector (DSI) for Nyanga

The Ministry of Education is one of the key stakeholders in conservation efforts as it links us with learning institutions such as Primary and Secondary schools. The team met Acting District Schools Inspector, Mr Ditima. From the discussions held, it was resolved that the Ministry can invite Zimparks/Birdlife Zimbabwe at their District meetings to sensitize heads of schools on the need to initiate environmental clubs in schools in the district. The initiative of community engagement was embraced and welcomed and further promised to give us a list of schools around the Nyanga National Parks for the introduction of Clubs before extending to other areas.



In the Pic, the DSI for Nyanga with BirdLife Zimbabwe Team, Nyanga National Park Ecologist and Extension Officer

#### Courtesy to EMA and Forestry Commission Nyanga

Our last effort of engagement for birds and biodiversity was meeting with the Environmental Management Agency (EMA) and Forestry Commission in the Nyanga District. We highlighted the plight of Blue Swallows and how habitat loss due to uncontrolled fires, deforestation and invasive plants are a major cause for concern in the Nyanga.



Blue Swallows Survey Team with the EMA District Manager Mr Manzou

## Recommendations from key stakeholders

It was resolved that -

- a) Zimparks must acquaint DDC Nyanga with the projects going on as part of responding to the Devolution requirements.
- b) BirdLife Zimbabwe should join hands with EMA, Forestry Commission, Zimparks and ZRP Nyanga to raise awareness veld fire suppression.
- c) BLZ to scale up bird awareness programme in the district among communities and young children and support sporting and community projects for buy-in by the communities.



## Blue Swallows Awareness and education workshop

On 23 March 2021, BLZ organised a community training workshop on Blue Swallows and bird conservation. The workshop was attended by community members of the Magadzire area, comprising of women, young girls and boys. The meeting was also attended by three teachers from the Magadzire Primary School. The participants showed huge interest in birding and biodiversity conservation initiatives.



Participants following proceedings at the Blue Swallows and Bird Awareness Workshop at Magadzire Primary School, Nyanga

Proceedings of the Workshop - Tuesday, 23 March 2021 – Magadzire Primary School

ITEMS	ACTIVITY	DONE BY
Opening prayer	He gave the opening prayer for the workshop	Mr Samanyawo
Introductions	The moderator led the self-introduction	Mr Goora
Welcome remarks	He thanked Zimparks and BirdLife Zimbabwe for coming to their area as this will open their eyes to derive beneficiation from the natural resources in their Ward and push the sustainable of nature agenda.	Mr Goora
Background to the BirdLife Zimbabwe	<p>He stated that BLZ was formed in 1951 initially as the Rhodesian Ornithological Society whose main thrust was centred on bird-watching only. In 2002, BLZ became a full partner of BirdLife International, broadening the mandate and scope of the then Rhodesian Ornithological Society. Conservation of bird habitats became pivotal at the organisational level as this affects the populations. Coming into, why birds?. He highlighted that birds are the visible indicators of the healthiness of the environment. In Zimbabwe, 674 Birds are on the list and a good number of them attract foreign bird watchers.</p> <p><b>The key objectives of BLZ are the following-</b></p> <ul style="list-style-type: none"> <li>✓ To save species</li> <li>✓ To conserve Habitats Important for Birds and other Biodiversity</li> <li>✓ To Increase Awareness and Enjoyment of Birds</li> <li>✓ To Encourage Ecological Sustainability</li> <li>✓ To Empower People for Positive Change</li> </ul>	Mr Chirimuuta R
<b>Opportunities and role of communities in Conservation</b>	He started by explaining the role of the Community Conservation Programmes unit in Zimparks as the way-out to get communities to realise benefits from conservation, through training and livelihoods	Mr Mashava J

	<p>enhancement projects so as for the communities to appreciate wildlife. By so doing, citizens will appreciate that wildlife and products thereof are an important asset.</p> <p>He went on to explain the approaches where communities can work hand in glove with Zimparks</p> <ul style="list-style-type: none"> <li>✓ <i>Community centred conservation</i></li> </ul> <p>This is a working relationship where communities work with Zimparks and augment the conservation drive by providing informer networking and promptly advise Zimparks of planned poaching expeditions, hence working proactively. In most instances, reports of stray wildlife are swiftly relayed to authorities from communities thereby minimising loss of life and property. Communities are also taught how to co-exist with wildlife.</p> <ul style="list-style-type: none"> <li>✓ <i>Community conservation research network</i></li> </ul> <p>Communities are a key component of research as wildlife knows no boundaries and in most cases stray into areas adjacent to the Parks estates. Our Research Unit work also hands in glove with people who live side by side with a game to get information about mortalities, times of movement of the game and many other issues. In return, this information is taken back to communities so that they can adapt to living with wildlife through conservation awareness campaigns.</p> <p>By involving communities, Zimparks enjoys the following from the mutual relationships-</p> <ul style="list-style-type: none"> <li>✓ Build trust</li> <li>✓ Promote equity and gender equality aimed to remove cultural stigma by working with men and women.</li> <li>✓ Support reconciliation and redress</li> <li>✓ Adopt a rights-based approach to</li> </ul>	
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	<p>conservation</p> <p>✓ Respect and revitalised local rules for decision making.</p> <p><b>Opportunities offered by Zimparks</b></p> <p>These are livelihoods enhancement opportunities afforded by working with Zimparks through win-win scenarios or as part of community assistance.</p> <p><i>Apiculture</i></p> <p>At Nyanga National Park, 13 groups were afforded space to put their beehives in the Park where the ecology is natural. In total, over 3500 hives are in the Park and this helps us in building a working relationship with the community thereby boosting a sense of ownership. We work together in monitoring poaching and uncontrolled fires. In return, communities declare only 5% of the honey. This project is one of the lives changing in the Nyanga District and our next move is to equip communities with honey value addition skills for them to derive more benefits from this union.</p> <p><i>Water extraction</i></p> <p>Nyanga National Park is the fountain of water sources that form into Pungwe and Gairezi catchments. 78 groups in Honde Valley and 12 in Nyanga Urban benefited from this project. In Honde area, water from the Park brings life to the thriving Banana commercial plantations. In Nyanga town, residents are working on gardening, which is the source of vegetables, which is key in the nutrition baseline. In all instances, these two projects enable communities to pay a small fee for administration purpose to Zimparks and get water all year round. In engaging them, conservation messages will be shared with the communities, hence improves community involvement in conservation</p> <p><i>Timber extraction</i></p>	
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	<p>The Park is full of wattle and pine trees which are invasive and to eradicate them, engaged communities through the following-</p> <p><i>1.Community Timber Projects</i></p> <p>Gazi and Tangwena communities were given permits to harvest timber in the Park and improve their livelihoods</p> <p><i>2.Individual Timber Permits</i></p> <p>13 individual timber harvesting permits were issued out in January 2021 for Nyanga communities. This proves the fact that eradicating evasive plants can be the source of livelihoods and the timber industry is the key business in Nyanga District</p> <p><b>School wildlife clubs/Junior Rangers</b></p> <p>As a thrust to involve learners in conservation, the Authority brought about a concept where we get into schools and take learners on board. The clubs are now in schools</p> <p><b>Other projects</b></p> <p>Source of employment</p> <p>Communities can benefit from working with Zimparks in areas like Tour guiding. Most clients who come to Nyanga want to visit Mt Nyangani, hence guiding becoming a flagship job in tourist resorts. Youth can go to Mushandike College and train as guides for mountain hiking and birding.</p>	
<b>Blue Swallows presentation</b>	<p>He indicated that Blue Swallows are Vulnerable species according to the IUCN Redlist Criteria and in Zimbabwe, they breed in the Eastern Highlands in summer before migrating northwards to Uganda, Tanzania and Kenya in winter. He elaborated the distinctive feature of the Blue Swallows in the swallow family and between the Male and Female swallows. The presenter went on to highlight that Blue Swallows in particular are inter African migrants</p>	Mr Sakarombe

	<p>breeding in Zimbabwe, South Africa, Swaziland, Zambia and Malawi then fly to Kenya, Tanzania, Uganda and DRC in the off-breeding season. They nest in sinkholes or Aardvark holes, under the bridge and sometimes in buildings.</p> <p>The presentation also went on to highlight that in Nyanga District, their distribution extends to Nyanga National Park, Dazi, Magadzire, Arda, Matema and Bende areas. In Mutasa District, they are found in Stapleford and Penhalonga while in Mutare District sightings have been recorded in the Vumba area and Chimanimani as well. In essence, the endemic bird is only found in the Eastern Highlands region.</p> <p>Also, the presentation noted that 25% of the global population breeds in Zimbabwe and the bird is endangered.</p> <p>He went on to explain the threats of Blue Swallows as the following-</p> <ul style="list-style-type: none"> <li>✓ Invasive plants which destroy their habitat- e.g. <i>wattle and pine plantations</i>.</li> <li>✓ Veld fires- destroys their habitat as well</li> <li>✓ Overgrazing in communal areas</li> </ul> <p>He also took time to explain the migration chain like that, the Blue Swallows moves to the equatorial region from April and they come back around September. During their flights, they utilise stopovers along the way to supplement their food but challenges of degradation of these areas have been noted in some instances hence it is everyone's role to conserve their habitats</p> <p>Regarding their offspring, a Blue Swallow lay 2-3 eggs and incubate for 15 days then it takes the young one to fly from 20-26 days.</p>	
<b>Brainstorming</b>	<p>The participants brought about the following-</p> <ul style="list-style-type: none"> <li>✓ The Blue Swallows are resident in the Magadzire area</li> </ul>	Participants



	<ul style="list-style-type: none"> <li>✓ It is every villager's responsibility to preserve the endangered birds.</li> <li>✓ Zimparks and Birdlife Zimbabwe must engage Magadzire Primary school and start a conservation group targeting wildlife issues among young people.</li> </ul>	
<b>Recommendations</b>	<p>The following was observed-</p> <ul style="list-style-type: none"> <li>• There is a need to work with the community in identifying Blue Swallows nests along the eastern boundary of Nyanga National Park.</li> <li>• There is a need to have a Nyanga Blue Swallows working group where sightings and nests are reported.</li> <li>• Fire is one of the most key problems in the community and Park and as such, there is a need to train communities on fire fighting.</li> <li>• There is a need to widen the working group by imparting Blue Swallows education to learners in Schools.</li> <li>• GRAPA Biodiversity Group needs capacity building to grow the project but the Apiculture being done in Nyanga Nat Park was greatly appreciated.</li> <li>• There is a need for Youths out of school to be trained in Tour guiding so that they can be employed.</li> <li>• The Magadzire area is rich in timber offcuts as such they brought a request to have more members being trained in Apiculture projects.</li> </ul>	Participants

## Schools Engagement

“Children are born with a sense of wonder and an affinity for nature. Properly cultivated, these values can mature into ecological literacy, and eventually into sustainable patterns of living.” ~Zenobia Barlow

Through the project support, two schools were engaged for the purpose of instilling the interest of birds to the young minds. BirdLife Zimbabwe engaged children from Magadzire and Nyamhuka Primary schools in Nyanga on the 11th and 13th of October 2021. Discussions were centered on the importance of ecosystems, bird identification and migratory birds. The communication theme was “Protect Blue Swallows Nests” was introduced to the school children and with other bird materials shared with students.



**Young Blue Swallow Ambassadors at Magadzire Primary School, Nyanga South**

## **Recommendations**

The following are the key conservation initiatives for bird and biodiversity conservation in Nyanga;

1. Habitat conservation and ecosystems landscape management
2. Awareness and capacity building
3. Answering the unknowns – filling the knowledge gap

### **Habitat Conservation and proper ecosystems management**

- a. There is a need to influence and support Nyanga Rural District Council (RDC) to develop and implement a Local Environmental Action Plan and adopt nature-based solutions for Climate change mitigation through the restoration of degraded ecosystems in Nyanga Town
- b. Enhance institutional capacity for Nyanga RDC to mainstream and integrate biodiversity priorities in their land-use planning and decision making.
- c. Develop and implement an effective Invasive Alien Species Management Plan.
- d. Secure breeding sites in communities and commercial farms through stewardship initiative.

### **Awareness and capacity building**

- a. Enhance community awareness on BS by reviving and capacitating all the Site Support Groups for Nyanga IBA,
- b. Reach out to schools to instil the love for birds among school children (presentations, birding clubs in schools, social media, mainstream media etc)

### **Answering the Unknowns – Knowledge Gap**

1. Expand monitoring and surveillance of Blue Swallows into other areas outside Nyanga.
2. Find out the impact of changing climate on the ecology of Blue Swallows
3. What is the state of their migration routes?
4. What is the average migration success rate?

## Picture Collage



**Project Budget Summary**



**BirdLife Zimbabwe**  
**Received (08.09.2020)**

-	
2980,64	3769,4

ABC Blue Swallows

Budgets

Budgets

Actual  
Expenses  
US\$

Actual  
Expenses  
GBP

Balance  
US\$

GBP

US\$ @

Rate

Stationery and other administration costs	39,00	50,00	50,00	40,10	-
Designing and Printing of Posters	109,20	140,00	87,50	70,18	52,50
Designing and Printing of a Banner	74,10	95,00	35,00	26,12	60,00
Designing and Printing of T-shirts	156,01	200,00	105,00	84,21	95,00
GPS unit	234,01	300,00	27,00	20,15	273,00
Digital camera	187,21	240,00	26,00	19,40	214,00
All stakeholder Workshop for the conservation of Blue Swallows in Nyanga	226,21	290,00	95,59	72,45	194,41
Research Permit from the National Park	296,41	380,00	380,00	304,77	-
Local Transport	62,41	80,00	40,00	31,57	40,00
Accommodation	577,22	740,00	1 097,00	846,50	(357,00)
Food	191,11	245,00	594,00	456,54	(349,00)
Fuel	530,42	680,00	942,00	721,29	(262,00)
Tollgate fees	7,80	10,00	18,17	13,73	(8,17)
BirdLife Zimbabwe administration fee	299,53	384,00	272,14	273,62	111,86

**Total** 2 990,64 3 834,00 3 769,40 2 980,64