

Bird Population Monitoring Scheme in Uganda: a useful scheme in monitoring trends for Common Bird species

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Abstract

Common bird indicators can help measure progress towards reducing the rate of biodiversity loss at the national, regional and global levels. The Common Birds Monitoring Scheme is an international programme aimed at monitoring trends in the population of common and widespread bird species in the world. In Uganda, this scheme is called the Bird Population Monitoring (BPM) and is run by *Nature*Uganda; the BirdLife International partner in Uganda. This scheme has been running for four years since 2009 across all parts of Uganda in and outside Protected Areas. Counts are done twice a year in January and July. Numbers of birds for all species seen along 2km transects are counted in all sites. Seven rounds of data collected have been entered into the WildBirds database and analyzed, giving a total of 691 species from 88 sites monitored through a network of 112 volunteers. From these results, the most common and wide spread birds in Uganda include, the Common Bulbul, Grey-backed Camaroptera, Red-eyed Dove, Speckled Mousebird, Bronze Mannikin, Scarlet-chested Sunbird and Marabou Stork. The most species rich site in protected areas was in Kidepo Valley National Park followed by Queen Elizabeth National Park and then Murchison Falls National Park. However, many of the best species rich sites were in privately owned small-scale mixed agricultural sites outside Protected Areas. This is an indication that much of the common and widespread birds are outside protected areas and it needs some form of protection. There is thus a need for promoting community conservation in the country. This can be emphasized through a regional more so global action and that is where the African Wild bird indicator Scheme comes in. Through the WorldBirds database, data from the Common Birds monitoring scheme can be used by the African Wild Birds Indicator and the Global Wild Birds Indicator Schemes to inform regional and global conservation actions for the protection birds. This scheme can also inform policy decisions by the government on the conservation of biodiversity at a national, regional or global level such as conventions and treaties.

Key Words: Wild Birds Indicator, Common Birds, Population, Trends, Monitoring

Background

Bird populations are a good indicator of overall environmental sustainability because of their available excellent data, based on the volunteer efforts of skilled birdwatchers; their stable taxonomy; a thorough knowledge of their ecology and behavior and their meaningful responses to environmental change. Bird populations integrate a set of environmental changes, because they are mobile and often wide-ranging. Bird numbers also respond to environmental changes more slowly than those of smaller organisms, and at a larger spatial scale.

Wild Bird Indicators show the average trends in abundance of a selected set of bird species and can help measure progress towards reducing the rate of biodiversity loss at the national, regional and global levels. The Global Wild Birds Indicator Scheme is a scheme that focuses on the average trends in abundance of common and widespread bird species. This scheme is especially useful in using birds to show change in the overall condition of ecosystems, which is difficult and expensive to measure directly. Strengths of common and widespread bird indicators include their statistical robustness, relative simplicity, cost-effectiveness and ease of updating the data.

The aim of the Global Wild Bird Indicators is to monitor and report on the impact of environmental change on bird populations worldwide. The indicator is one of three being pioneered by BirdLife International (alongside indicators of the status of bird species - the Red List Index and of sites important for their conservation - Important Bird Area Indices) and has the potential to become a valuable measure of trends in global biodiversity and the wider environment. The African Wild Bird Indicator Scheme is part of the Regional Wild Bird Indicator scheme that feeds into the Global Wild Birds Indicator scheme.

Bird Population Monitoring (BPM) commonly known as the Common Birds Monitoring scheme is an international programme targeting common and widespread bird species. The main aim of this scheme is to monitor trends in the population of bird species that we think are common in our areas, reason being that “common species” are usually ignored in many conservation drives, which usually target the threatened or endangered species. Data from this scheme, which is coordinated by *NatureUganda*, is entered into the Global web-based WildBirds database, which can then be used by the Regional Wild Bird Indicator Scheme.

Aim

The aim of this report is to highlight the importance of the Common Birds Monitoring scheme in showing the trends in common and widespread birds in Uganda and showing how this scheme can contribute to the African Wild Indicators.



Methods

In Uganda, BPM scheme is coordinated by *NatureUganda*; the BirdLife partner in Uganda and has been running for four years since 2009. These counts are conducted in all parts of the country in and outside protected areas (Figure 1). Counts are done twice a year in January and July using line transects method. Transects are approximately 2km long divided into 200m sections for the purpose of easily estimating the 2km. Counts are done by volunteers who consist of interested birders and researchers.

Seven rounds of data have been collected so far and this is the basis for these results. The data obtained from these counts is entered into the East African Birds Database which is part of the WorldBirds Database. Simple analyses have been done for this report but future analyses will be done using TRIM, an analysis package that caters for missing values.

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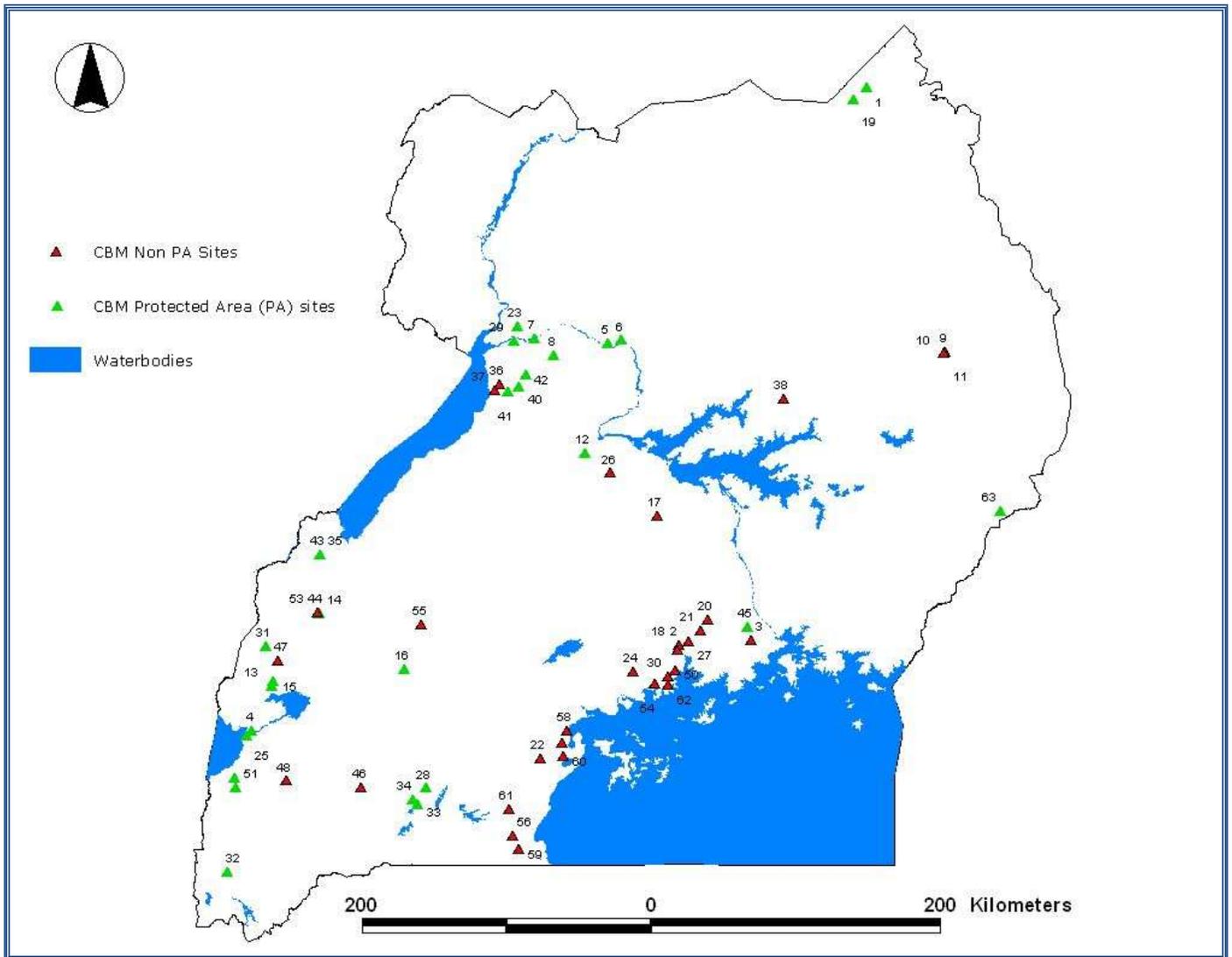


Figure 1: Bird Population Monitoring Sites in Uganda



Results and discussion

We are now up to a total of 691 species in the 88 sites monitored in Uganda by the 112 volunteers participating in this scheme.

The results indicate that the Common Bulbul is the commonest and wide spread species as it has been recorded with 5,316 individuals recorded in 91% of sites monitored. Other widespread bird species include the Grey-backed Camaroptera recorded in 84% of the sites, Red-eyed Dove in 78% of the sites and Speckled Mousebird in 77% of the sites (Table 1), while other common (abundant) bird species include Bronze Mannikin with 3,278 individuals, followed by Speckled Mousebird with 2,444 and Marabou Stork with 2,110 (Table 2).

Some of the most twenty common and most widespread birds in Uganda are species which inhabit areas with trees like the Green Pigeon, Eastern Grey Plantain-eater, Rueppell's Glossy-starling, and Scarlet-chested Sunbird. This indicates that many sites in Uganda still hold favourable habitat for a good number of bird species. This state of habitat has to be maintained if not improved to ensure sustainability of these bird populations.

Interestingly, some of the most species rich sites are outside protected areas (Table 3), meaning that they have no significant protection but are under the mercy of land owners. Communities around these sites therefore have to be sensitized on how to protect the birds' diversity in their sites.

Species Trends

Trends for some of the common and widespread species mainly indicate some increases in most of the species, though with a few decreases (Figure 2). These trends are very useful in indicating how the environment is changing over time.



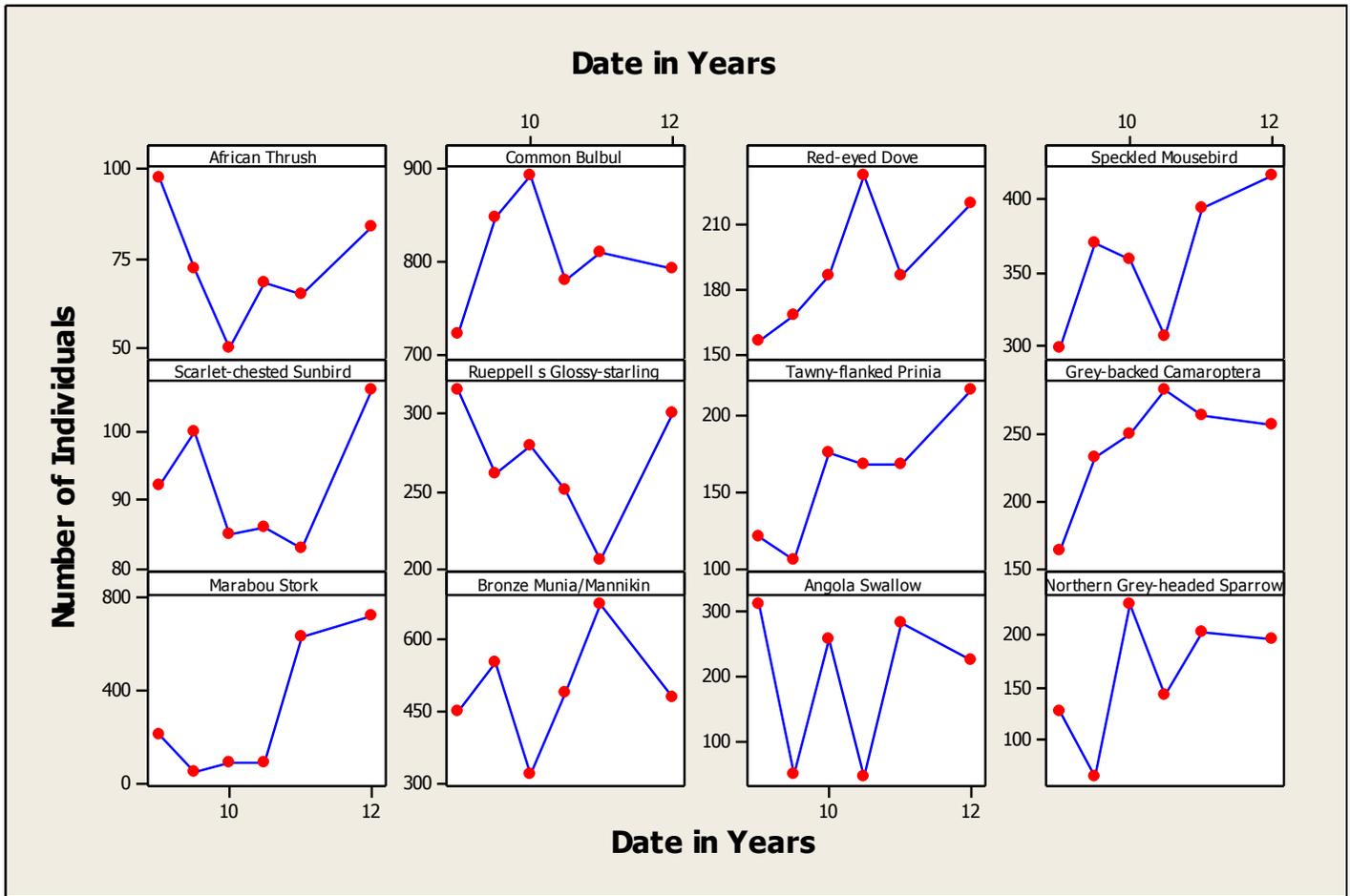


Figure 2: Trends in numbers of Individuals for some of the common and widespread bird species in Uganda.

Conclusion

As from the results, this scheme can guide the regional and global actions on the conservation of common and widespread bird species. The Pan-European Common birds Indicator is a good example of how this scheme works to inform conservationists on the state of common and widespread bird populations. If developed better in the African region, it is a useful tool in the conservation of these bird species. Therefore, all partners in Africa are encouraged to use the WorldBirds database to populate the Africa regions Indicator scheme and help conserve our common and widespread bird species.

Acknowledgements

A big thanks to all the 112 Volunteers participating in this scheme whose outcome will guide the conservation of the bird species in nationally, regionally and globally. You are all encouraged to participate in this scheme. You can monitor birds anywhere you feel like be it in your compound at home or at your place of work, as long as you are committed to monitoring the site twice a year around January and July. This project is funded by the Royal Society for the protection of Birds (RSPB)

Details of these are available with the BPM project coordinator at NatureUganda.
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Table 1: The twenty most widespread Birds in Uganda 2009-2012

Species Name	Individuals	Proportion of sites
Common Bulbul	5,316	91%
Grey-backed Camaroptera	1,701	84%
Red-eyed Dove	1,296	78%
Speckled Mousebird	2,444	77%
African Thrush	492	72%
Tawny-flanked Prinia	1,129	70%
Scarlet-chested Sunbird	602	70%
Bronze Munia/Mannikin	3,278	64%
Hadada Ibis	833	64%
Eastern Grey Plantain-eater	1,014	61%
African Green-pigeon	602	60%
Blue-spotted Wood-dove	383	60%
Rueppell's Glossy-starling	1,911	59%
White-browed Coucal	416	58%
Yellow-fronted Canary	629	57%
Black Kite	627	56%
Black-headed Weaver	2,105	55%
Fork-tailed Drongo	506	55%
Angola Swallow	1,197	53%
Northern Grey-headed Sparrow	1,142	52%

Table 2: The twenty most abundant (Common) species in Uganda 2009-2012

Species Name	Number of Individuals	Proportion of sites
Common Bulbul	5,316	91%
Bronze Munia/Mannikin	3,278	64%
Speckled Mousebird	2,444	77%
Marabou Stork	2,110	42%
Black-headed Weaver	2,105	55%
Sand Martin	2,053	34%
Red-billed Quelea	1,980	13%
Ruppell's Glossy-starling	1,911	59%
Grey-backed Camaroptera	1,701	84%
Red-eyed Dove	1,296	78%
Black-headed Gonolek	1,272	45%
African Palm-swift	1,257	48%
Village Weaver	1,225	49%
Angola Swallow	1,197	53%
Northern Grey-headed Sparrow	1,142	52%
Piapiac	1,131	20%
Tawny-flanked Prinia	1,129	70%
Vieillot's Black Weaver	1,084	30%
Ring-necked Dove	1,039	41%
Eastern Grey Plantain-eater	1,014	61%

Table 3: The most species rich sites in Uganda 2009-2012

Site Name	Number of individuals	Number of species
Narus Valley/Katrum Lodge (PA)	4,158	190
Transparent Lake (PA)	5,265	144
Bulyasi-Mabira (Private)	1,935	139
Kasese Woodland NP (PA)	1,577	138
Waiga South NP (PA)	2,086	134
Kalabe West (Private)	1,856	133
Kidepo River NP (PA)	1,663	132
Kiweebwa (Private)	2,338	127
Kasyoha Kitomi Ecotourism Education Centre (PA)	4,773	125
Waiga North NP (PA)	1,317	124
Lukaya Flats (Private)	1,098	121
Mweya Peninsula NP (PA)	3,660	120
Rwonyo Gate NP (PA)	1,091	118
Nshara Gate NP (PA)	1,334	114
Channel Track NP (PA)	1,936	113
Kanyawara-Kibale NP (PA)	1,429	113
Paara Woodland NP (PA)	1,874	112
Kyotera South (Private)	1,147	111
Sanga Gate NP (PA)	1,019	111
Kayanja Savanna (Private)	1163	110

SUGGESTED READING

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