



## February 2011 Count Report - Bird Population Monitoring Programme

**Project title:** Bird Population Monitoring in Botswana: Involving citizens in biodiversity monitoring



*Kori Bustard*

**Implemented by:** BirdLife Botswana in Partnership with the Department of Wildlife and National Parks (DWNP) and the Department of Environmental Affairs (DEA)



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## Introduction

The drive for the February 2011 count was a perfect one for the Bird Population Monitoring (BPM) Programme<sup>1</sup> in Botswana. It has been a great pleasure to have many of the volunteer/observer's enthusiastically taking on their transects without much pressure from their coordinators. The BPM programme is currently experiencing a fulfilling growth and a thank you goes to the observers for their passionate support in protecting and conserving Botswana's birdlife.

The BPM observers are making a huge contribution to the conservation of birds countrywide and above all globally. This is because the BPM programme is a global monitoring network executed by European and a few African countries using different methodologies. These collective efforts make an active contribution to global conservation of our biological diversity. Nationally, with the data that the observers collect, we are able to see the distribution, diversity, abundance, composition and population trends of birds of Botswana. The data can also be used, in relation to land use changes and rainfall variation, to determine if there is any change in their habitat in the long run. Nonetheless, BirdLife Botswana acknowledges that, the current data is still unripe to use to analyse the above-mentioned variables and so we depend on the observers to pledge a long term commitment to make all this a reality. This is so because the existing bias is a result of counts being more skewed to human settlement areas resulting in less coverage in remote areas. The other reason is some of the observers are still learning bird calls and they are unable to identify and record all the birds that they see or hear in their transects.

In February 2011 a team of counters throughout the country counted birds in their allocated transects using Point Count methodology<sup>2</sup> as usual. The results obtained from the February 2011 count reflected that a total of 218 observers have undertaken 161 transects in contrast to 159 observers with 122 transects undertaken in the November 2010 count. There were 27 605 birds and 352 bird species recorded as opposed to 14 056 birds and 289 bird species recorded during the November 2010 count. The main challenge has been that some of the observers do not have access to Global Positioning System (GPS) and in some areas there appear to be some records of birds outside their known range and distribution.

As part of the recommendations BirdLife Botswana has approached the Department of Environmental Affairs (DEA) to assist with the procurement of three GPSs which will be availed to the observers. It is also recommended that observers should not record birds that they are uncertain about their identity unless they have checked their range and distribution on the field guide. Lastly the Society pays tribute to the sponsors of the programme, the Global Environment Facility Small Grant Programme (GEF SGP) and the Royal Society For the Protection of Birds (RSPB). The Society would also like to acknowledge the implementing partners the Department of Wildlife and National Parks (DWNP) and the Department of Environmental Affairs (DEA) for their continual support of the programme.

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<sup>1</sup> The Bird Population Monitoring (BPM) Programme is aimed at demonstrating that birds are useful in showing changes in the overall condition of ecosystems or the environment. The BPM programme will develop a Wild Bird Index for Botswana showing bird population trends over time and to use these trends to set conservation priorities, to report on biodiversity changes/state of the environment in Botswana (and to contribute to African/global effort). The scheme runs twice annually in February and November and offers exciting birding opportunities from areas that are hardly visited.

<sup>2</sup> Point count is the methodology used for Bird Population Monitoring Programme in Botswana. The observers count birds from a 2 km transect stopping every 200 m for five minutes to record birds that they see or hear. Observers are allocated transects by the project coordinator and local representatives in different branches using the 105 designated grid squares chosen throughout Botswana. Transect allocations are done randomly where there is no designated grid square present near the participants to allow flexibility within the programme. The transects are counted by foot or vehicle in early mornings only.

## February 2011 count results

The results obtained from all participants are summarised in table one below.

Table 1: Summary of the results for the February 2011 count

Location/BirdLife branch	No. of participants	No. of transects	No. of transects in the chosen grid	No. of transects not in chosen grid	No. of chosen grids not covered per location	No. of birds	No. of species
Gaborone	58	46	13	33	0	7251	202
Francistown	29	23	2	21	4	3555	174
Maun	30	19	8	11	0	4563	183
Kasane	25	12	4	8	3	3873	188
Jwaneng	8	5	3	2	1	339	66
Gantsi	6	3	0	3	3	190	45
Kweneng (khutse)	1	2	1	1	0	439	37
Serowe/Palapye/Mahalapye	8	7	0	7	0	901	88
Southern (DEA)	10	3	0	3	0	331	39
<b>Department of Wildlife and National Parks (DWNP)</b>							
Central (Serowe)	5	12	12	0	0	1363	70
Kgalagadi (Tsabong, Gemsbok NP)	13	10	7	3	4	1500	62
Ngamiland (Maun)	5	6	6	0	2	1809	38
Southern (GGR, Mannyelanong)	9	4	0	4	0	500	53
Kgalagadi (Gantsi, CKGR)	4	3	0	3	4	661	46
Kgalagadi (Mabutsane)	1	3	3	0	1	163	29
Chobe (Kasane)	6	3	3	0	0	167	22
<b>Grand total</b>	<b>218</b>	<b>161</b>	<b>62</b>	<b>99</b>	<b>22</b>	<b>27605</b>	<b>352</b>

## Discussion

The February 2011 count observers were from Gaborone, Kasane, Maun, Francistown, Serowe, Jwaneng, Gantsi, DWNP and DEA offices as shown in table 1 above. The results from the count show a total number of 218 observers who participated in a total of 161 transects undertaken altogether. Of the 105 chosen grids around Botswana 62 transects were undertaken in those grids and therefore, 99 transects were undertaken outside the designated grid squares. The total number of birds seen in all the transects was 27 605 with a total number of 352 species recorded by participants.

The average number of birds recorded per transect was 177 and the average number of species recorded was 25 per transect. The highest total number of species recorded was 65 at Lobatse by Mark Bing from Gaborone region. The most common species recorded by participants was CapeTurtle-Dove 133, Laughing Dove 100, Cape Glossy Starling 97, Fork-tailed Drongo 93, Blue Waxbill 77, Southern Yellow-billed Hornbill 77, White-browed Sparrow-Weaver 72, European Barn Swallow 69, Grey Go-away Bird 67 and Crimson-breasted Boubou 67. The species with the highest number counted for all transects were Red-billed Quelea 3085, Cape Turtle-Dove 2169, European Barn Swallow 1390, White-browed Sparrow-Weaver 880, Laughing Dove 786, Scaly-feathered Finch 768, Cape Glossy Starling 644, Black-chested Prinia 491, Cattle Egret 472 and Blue Waxbill 469.

With respect to the birds of concern species or the globally threatened species there were 25 Bateleurs, 72 White-backed Vultures, 9 Lappet-faced Vultures, 20 Cape Vultures, 24 Kori bustards recorded in February 2011 as compared to 10 Bateleur, 17 White-backed Vultures, 2 Lappet-faced Vultures, 5 Cape Vultures, 6 Kori Bustards recorded in November 2010 count. There was a notable increase of the alien species, the Common Myna, with 25 records as opposed to 8 records in November 2010 count. The Common Myna was spotted at Gaborone, Mahalapye, Lobatse, Otse and Oodi. Gavin and Marjorie Blair from Kasane remain the outstanding participants with five transects completed.

### The Comparison of the February 2011 and November 2010 count

Since the Bird Population Monitoring Programme is a long term process aimed at determining the bird population trends, it is in this regard that there has to be a comparison of the previous and the current count results, namely the February 2011 and the November 2010 count results. Table 2 below compares the two counts.

On the appendix of this report, on page 8 and 9, there is a Botswana map showing the distribution of the transects undertaken for the February 2011 count in figure 1 and November 2010 count in figure 2 respectively. These maps show a notable increase of coverage throughout the country in terms of the transects undertaken between the two counts. However, there are some designated grids in Northern Tuli Game Reserve, Werda, Charlesshill, Shakawe, Gumare e.t.c that need to be covered. The numbers of designated grid squares that are not yet covered with their locations are listed on table 3 of appendix on page 10. If anyone knows any potential volunteers in any of the locations mentioned in the table please forward their contact details to the coordinators.

Table 2: The comparison of the two counts- November 2010 and February 2011

Variables	November 2010 count	February 2011 count
No. of participants	152	218
No. of transects undertaken	122	161
No. of transects in designated grids	55	62
No. of birds seen	14056	27605
No. of species	289	352

average number of birds recorded per transect	127	171
average number of species recorded per transect	23	25

### **Challenges/Acknowledgement of Bias**

The challenges that emerged during the February 2011 count were:

1. Some of the BPM observers do not have access to GPS resulting in submitting their data with the record of the coordinates of start and end point missing.
2. Majority of the GPS coordinates recorded are saved in minutes and seconds format, rather than decimal format.
3. Some of the observers did not consistently keep their transect names and some use vegetation names to name their transects.
4. Few observers failed to repeat the transects they counted in November 2010.
5. Some of the counts were not submitted in time to allow entry of data and timely feedback.
6. There was still an acknowledgement that birds recorded in the majority of the transects do not truly represent the total number of birds that were present during the individual transect visits.
7. During the November 2010 count, there was still a bias of counters near the cities and towns, so this means that remote areas were not as well covered.
8. Much of the data entry was done at BirdLife Botswana head office in Gaborone which caused an overload and hence the delay in giving observers timely feedback.
9. In some areas there appear to be some birds recorded way outside their known range and distribution whereas in other areas there were relatively few misidentifications.
10. As it was with the November 2010 count, there are few records of water birds in the February 2011 results, which is good.

### **Recommendations/Way Forward**

1. BirdLife Botswana has approached the Department of Environmental Affairs (DEA) to assist with procurement of three GPSs and the Society is appealing to the observers who own GPS to assist those in their areas by recording the transects coordinates.
2. All the GPS coordinates should be recorded in decimal point format and consistency of the coordinates record is required, this is because the BPM system requires decimal point format.
3. It is recommended that observers should consistently use the name they used on their first visit to the transect and they should also use a geographically recognisable location/settlement names instead of vegetation or kopjes names.
4. As this is a monitoring scheme, the more transects are repeated the more robust the result becomes. Therefore it is an appeal to observers to make sure that they do not miss counting their transects during the months when the count is done-that is in February and November.
5. Ideally, counts should be submitted as soon as the data collection is completed to allow timely feedback.
6. Observers are advised to use the CD for the bird calls in order to improve their bird call identification skills, and if possible to attend BirdLife Botswana's monthly bird walks. To attend those walks they must contact the branch manager in their area for more information about when and where the walk will be. The bird call CD can be accessed through the coordinators and we request those who can, to donate P50.00 to get the CD, so that we can support reprinting of the CD.
7. Observers are encouraged to help grow the scheme by recruiting their friends to take part and also to pass on the names of possible volunteers to the coordinators in their areas.
8. The data submitted is entered on Botswana tickbird system <http://www.worldbirds.org/v3/botswana.ph>, therefore, BirdLife Botswana calls for those who are

willing to volunteer to enter their own data into tickbird to do so. Those who are interested should contact the coordinator to assist with the process of opening an account on tickbird.

9. Observers are advised to check birds known ranges and distribution in order to be certain about their records, in other words birds should not be recorded outside of their known range and distribution without observers being certain about their identification.
10. The BPM scheme is mainly aimed at monitoring terrestrial species therefore observers should avoid having their transect going through wetlands and recording waterfowl species.

### **Acknowledgements**

Acknowledgements are due to the sponsors of BPM programme, the Global Environment Facility Small Grant Programme (GEF SGP) and Royal Society for the Protection of Birds (RSPB) and the Department of Wildlife and National Parks (DWNP) and the Department of Environmental Affairs (DEA) for the joint partnership in project implementation. BirdLife Botswana would like to thank all those who participated in the February 2011 count. Sincere gratitude is due to the following BirdLife Botswana Branch Managers for their continual support in organising and facilitating the successful participation of Bird Population Monitoring Programme volunteers in their areas; Kevin Grant – Gantsi Branch, Pete Laver – Kasane Branch, Nicky Bousfield, Michael Turner and Mike Soroczynski – Francistown Branch, Kabo Ditshane – Jwaneng Branch and Karin Tanquist – BPM local representatives for Gaborone. The success of the BPM scheme is due to all of their efforts. Lastly a thank you to Danae Sheehan and Ian Fisher from RSPB for their continual support for the Bird Population Monitoring programme in Botswana.

### **Appendixes**

Figure 1: Map showing the distribution of the transects and the designated grid squares for the February 2011 count

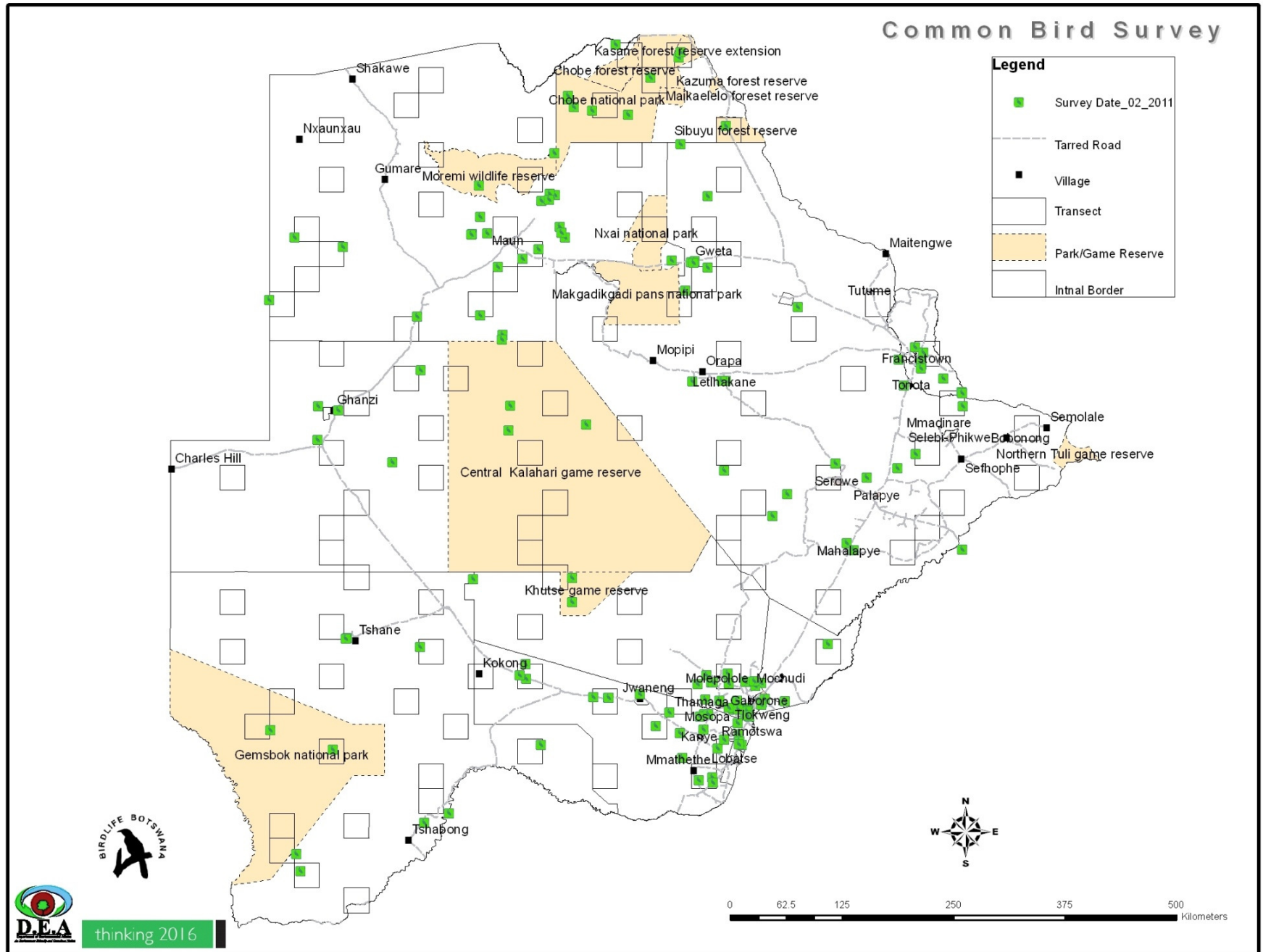


Figure 2: Map showing the distribution of the transects and the designated grid squares for the November 2010 count

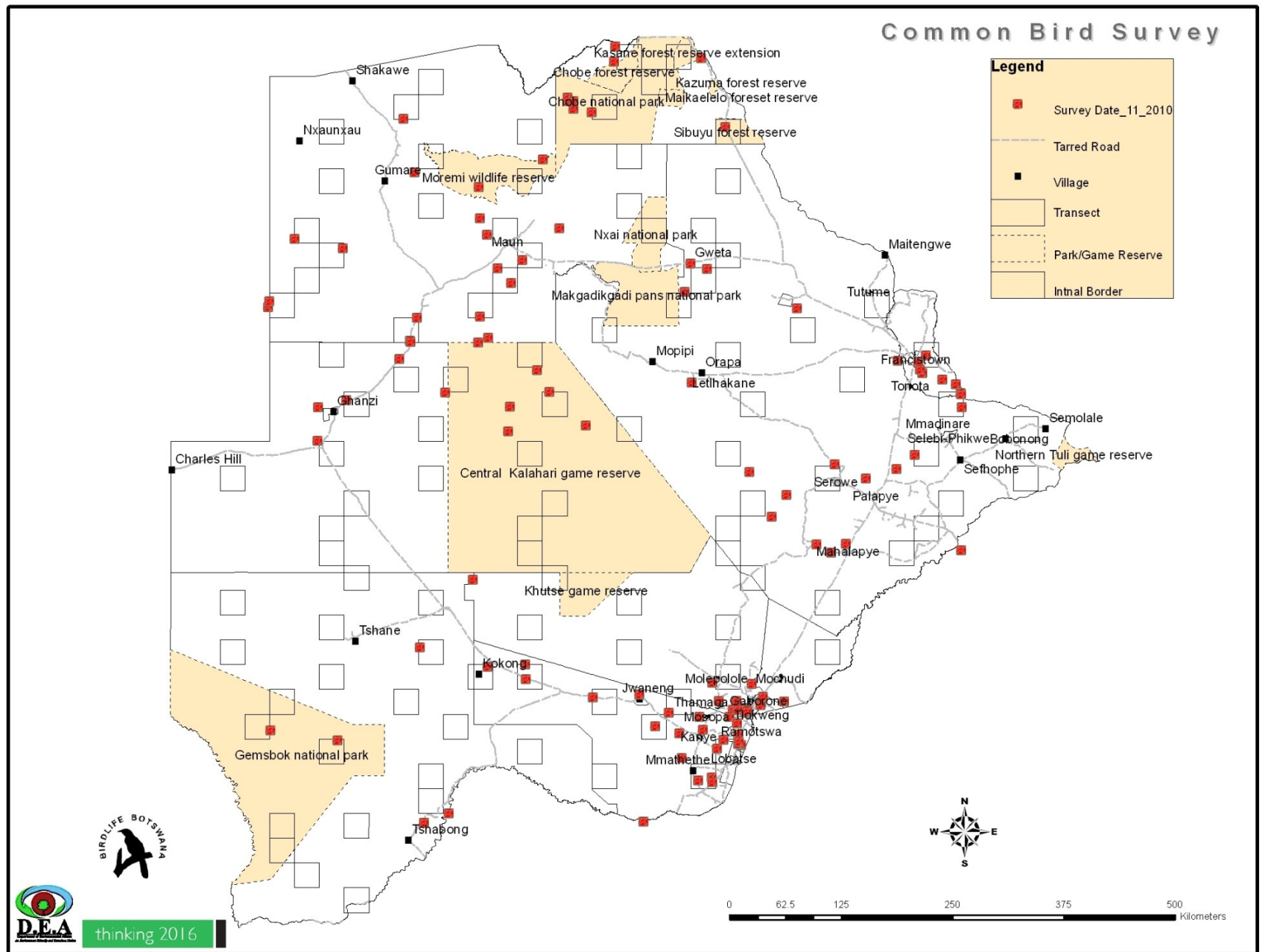


Table 3: Designated grid squares that are not yet covered

<b>Location</b>	<b>Number</b>
Francistown	2
Northern Tuli Game Reserve	2
CKGR	4
Khutse Game Reserve	2
Nxai Pan National Park	2
Makgadikgadi National Park	1
Gumare	3
Shakawe	2
Chobe National Park (Kasane)	3
Orapa	2
Sojwe	1
Lentsweletau	1
Jwaneng	1
Lone tree camp (between Kang and Gantsi Road)	4
Kang	1
Mabutsane	1
Hukuntsi	2
Zwitsha	2
Ukhwi	1
Tsabong, Gemsbok National Park	3
Werda	2
Charleshill	1
<b>Total</b>	<b>43</b>

**Note:** BirdLife Botswana's aim is to arrange for counters to cover these designated grid squares where possible.