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# LANIOTURDUS

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The Namibia Bird Club was founded in 1962 and has been active since then. The club's mission is to contribute to Namibian ornithology by, amongst other things, arranging regular birding outings, conducting bird ringing and atlasing excursions and educating the public about the value of birds. To achieve this, we organise monthly visits to interesting birding sites around Windhoek as well as regular visits to Avis Dam and the Gammams Sewage Works and occasional weekend trips further afield. Bird club members also participate in the African Waterbird Census twice a year.

Experienced birders are more than happy to help beginners and novices on these outings. If you have a transport problem or would like to share transport please contact a committee member. Depending on the availability of speakers and suitable material we present occasional lecture or video evenings at the Namibia Scientific Society premises. Members receive the bird club's journal, *Lanioturdus* and outings and events are advertised on the club's website [www.namibiabirdclub.org](http://www.namibiabirdclub.org).

The Namibia Bird Club is not affiliated to any global or regional organisation and relies entirely on members' subscriptions and donations to fund its activities.

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Cover photo © Holger Kolberg

## **Editorial**

Holger Kolberg  
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Winter is usually a time of dormancy and hibernation but this issue of *Lanioturdus* certainly has somewhat of a breeding flavour to it.

How many of us have birds breeding in our gardens? The only time we take notice is when the birds destroy our plants in their quest to gather nesting material or when we find a little chick that has dropped out of a nest before fledging.

We probably also notice the nests but how many of us have taken note of when the bird started building the nest, when were the eggs laid, hatching date etc.

Although a good summary of breeding data for the birds of Namibia has been published, it still contains many gaps and even when paging through 'The Bible' i.e. Roberts, it is amazing how little information is available about the breeding habits of some species.

In fact, I remember when Roberts VII was published, there was a list of 'missing information' published on the book's website and a lot of it pertained to breeding. I still have that list somewhere; perhaps it is time to dig it out...

Keep birding!

# Provisional atlas of breeding birds of Swakopmund in the coastal Namib Desert

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## Summary

A provisional urban bird atlas for Swakopmund, Namibia, has been completed in the austral summer 2016/2017. From the ecological point of view the town can be viewed as an oasis among a hyper-arid desert natural environment of the coastal Namib Desert. In total eighteen bird species were recorded as breeding. Four eudominant species Cape Sparrow *Passer melanurus*, Laughing Dove *Streptopelia senegalensis*, Rock Dove (Feral Pigeon) *Columba livia* and Common Waxbill *Estrilda astrild* comprised together 71.8% of all breeding birds. Two dominant species, Southern Masked Weaver *Ploceus velatus* and House Sparrow *Passer domesticus*, comprised an additional 14.5%. The remaining twelve species comprised the rest (13.7%).

## Introduction

So called urban bird atlasing is becoming an increasingly popular way of studying biodiversity in urbanized environments (Dunn and Weston 2008; Magle *et al.* 2012; Luniak 2013, 2017). Urban bird atlases provide vital information both for zoologists, urban ecologists, nature conservationists and urban planners. It has been shown that urban ornithological atlases can also be a useful tool in measuring and mapping the quality of human life in larger cities (Magle *et al.* 2012). Above all, urban bird atlases can be important in engaging citizens in scientific research and nature conservation in and around cities. Since at present more than half of the global human population live in big cities, such nature conservation can

be outstandingly effective and efficient.

The first urban ornithological atlas has been produced for London (Montier 1977). It was followed by many other European cities, e.g. Warsaw (Luniak *et al.* 2001), Hamburg (Mitschke and Baumung 2001) and Berlin (Otto and Witt 2002). By the end of 2010 there were over 100 such atlases in the world, including 72 in Europe (Luniak 2013, 2017).

In Africa, a first such atlas has been produced for the city of Bloemfontein, South Africa (Kopij 2001). Till present, the only other urban atlas has been presented for rather a small and remote town in the heart of the southern African subcontinent, Katima Mulio in northern Namibia (Kopij 2016). This atlas presented, however, distribution maps for only 36 less common species out of 122 species recorded there as breeding (Kopij 2016).

The purpose of this study was to produce a provisional urban bird atlas for one of the largest Namibian towns, and an important tourist destination. It is hoped that this atlas may initiate similar projects in coastal towns in Namibia and other parts of this country.

## Study area

Swakopmund is a town in western Namibia, located on the Atlantic coast in the Namib Desert at 22° 41' S, and 14° 32' E. The town was founded in 1892 as a main harbour for German South West Africa, but today it is mainly a beach and a tourist resort.

The human population was 44 725 in 2011.

The town has been well-planned in a western style, with numerous old buildings in the town centre going back to the beginning of the 20<sup>th</sup> century. It is characterized by well-managed gardens with lush exotic tree and shrub vegetation in the residential areas and along beaches. The dominant trees are *Washingtonia* and *Phoenix* palms, *Araucaria* and Wild Tamarisk *Tamarix usneoides*. Sport fields are covered with mown lawns, while along beaches and in residential areas clumps of herbaceous and succulent plants (including *Aloe spp.*) are maintained.

The climate is classified as mild desert, with average temperatures ranging from 15°C to 25°C and only ca. 20 mm of precipitation per annum. However, the Benguela current very often supplies moisture in the form of fog.

### Methods

The territory mapping method has been employed (Bibby et al. 1992), with one survey conducted in the 2016/2017 austral summer. To cover the whole study area (415 ha), six counts were carried out in the mornings on the following days: 16 January 2016, 18 December 2016, 20 December 2016, 30 December 2016, 7 January 2017 and 8 January 2017.

Birds were counted while walking slowly along streets. The routes were designed in such a way as to cover the whole study area. All birds showing breeding (e.g. transporting nesting material, constructing nests, feeding chicks etc.) or territorial (e.g. singing males) behaviour were plotted on a map. Special attention was paid to simultaneously singing males, as they were important in determining

the number of occupied territories. Special attention was also paid to not count the same birds twice, as this could overestimate the number of territories.

Each occupied territory has been treated as one breeding pair. Such a simplistic approach could, however, underestimate number of breeding females of some polygamous species, specifically the Southern Masked Weaver and Common Waxbill, and the co-operatively breeding Red-faced Mousebirds *Urocolius indicus*. In the case of pigeons (*Columba spp.*) the number of breeding pairs has been estimated by dividing by two the total number of recorded individuals. However, on maps the total number of individuals recorded is shown, as in summer these were probably mainly adult birds.

The dominance was calculated as the percentage of breeding pairs of a given species in relation to all breeding pairs of all species recorded. The eudominant species comprised at least 10% of all breeding pairs recorded, dominant species 5-9.99%, while subdominant – 2-4.99%.

### Results

In total, eighteen bird species were recorded as breeding in the austral summer 2016/2017 in Swakopmund (Fig. 1-18). Four eudominant species (Cape Sparrow, Laughing Dove, Rock Dove and Common Waxbill) comprised together 71.8% of all breeding birds. Two dominant species, the Southern Masked Weaver and House Sparrow comprised an additional 14.5%. The remaining twelve species comprised the rest (13.7%).

It should be noted that in other microhabitats around Swakopmund, some of these species (e.g. Laughing Dove, Cape Sparrow, Southern

Masked Weaver, Cape Wagtail *Motacilla capensis*, Common Waxbill) breed in much lower densities than in the town; while some others (e.g. Helmeted Guineafowl *Numida meleagris*, Grey Go-away-bird *Corythaixoides concolor*, House Sparrow, Rock Dove) were not recorded at all outside the town. On the other hand, in lush vegetation composed of reeds, rushes and other water emergent vegetation at the mouth of the Swakop River, ca. 200 m from the town, a few additional breeding species were recorded: Red-knobbed Coot *Fulica cristata*, Common Moorhen *Gallinula chloropus*, African Swamphen *Porphyrio porphyrio*, and African Reed Warbler *Acrocephalus baeticatus*. In the past, there was also a record of Green-backed (Striated) Heron *Butorides striatus* there (Becker 1984).

A few bird species were more common in the northern suburbs than elsewhere in the city, namely the Orange River White-eye *Zosterops pallidus*, Laughing Dove, Dusky Sunbird *Cinnyris fuscus*, African Red-eyed Bulbul *Pycnonotus nigricans*, Southern Masked Weaver and Common Waxbill. The reverse situation was recorded for the Rock Dove, House Sparrow and Helmeted Guineafowl. Cape Wagtail and Red-faced Mousebird were distributed fairly evenly over the city. The Cape Sparrow was more common in the suburbs closer to the beach than elsewhere (Fig. 1-18).

Only two Palearctic migrants were recorded in the town (excluding waders on the beaches): the Willow Warbler *Phylloscopus trochilus* (one record only) and the Barn Swallow *Hirundo rustica* (uncommon, single individuals recorded on a few occasions).

Contrary to expectations, no Cape Turtle Dove *Streptopelia capicola*, Tractrac Chat *Emarginata tractrac*, African Palm Swift *Cypsiurus parvus*, crows (Corvidae), starlings (Sturnidae), canaries (Fringillidae) and raptors (except for one possibly breeding pair of the Peregrine Falcon *Falco peregrinus*) were recorded as breeding in the town, although the urban habitat seems to be suitable for them, both in terms of food resources and nesting sites.

### Discussion

The recorded numbers of breeding pairs in Swakopmund in this study should be taken with certain precaution, as single counts usually underestimate numbers of species, especially those which are elusive, rare or not vocally active (e.g. White-backed Mousebird, Familiar Chat, Dusky Sunbird). For such species, the recorded numbers should be, therefore, assumed as representing minimal values. On the other hand, such common species as the Laughing Dove, Southern Masked Weaver, Common Waxbill or Cape Wagtail were exceptionally active during the counts and the estimated number of breeding pairs may well be close to the real figures.

There are factors which determine which bird species can live in urban environments, such as the structure and floristic composition of vegetation, competition with other species (especially those closely related), non-native predators (dogs, cats and rats) and supplementary feeding by people. It has been found that overall breeding density is often higher in urban areas than in surrounding native habitats, while the reverse is true in regard to species richness (Chace and Walsh 2004), and this relationship is well-reflected in Swakopmund and the surrounding area.

Most studies on urban avian communities across the world have reported a general decrease in species richness and an increase in overall population density and biomass with the increase of urbanization (Crooks *et al.* 2004). In the case of Swakopmund, both the increase in species richness and overall population density is evident with increasing urbanization. The town, especially the suburbs, holds higher numbers of bird species, nesting in higher density than any of the surrounding rural and natural areas. It is probably because the city plays the role of an oasis in a hyper-arid desert environment, creating a totally different ecological setting than the surrounding areas.

Urbanization tends to favour granivores, aerial insectivores, ground insectivores and cavity-nesters over tree/shrub nesting species (Chace and Walsh 2004). However, in Swakopmund the guild of aerial and ground feeding insectivores is poorly represented, as probably insects are not abundant in this hyper-arid desert environment at large.

As the time from urban development passes, avian communities become more distant from the native community, but more homogenous with other urban areas. This relationship is also well-reflected in Swakopmund, where the avian community in the old city centre resembles those in any city centres across the world (Dunn and Weston 2008): it is strongly dominated by few granivorous species, especially doves and sparrows, and has a high proportion of species adopting buildings as nesting sites.

A feral population of the Helmeted Guineafowl recorded in Swakopmund is of special interest. The population

occupies the city centre in the lush vegetation in close proximity to the beach. A total of 17 adult birds was counted there. Another smaller flock of seven adult birds was recorded around the Atlantic High School. Probably the flocks were established by a few escapees from aviaries. In the dense herbaceous vegetation along beaches they may perform quite well, although no data are available on their breeding performance. Rats *Rattus* spp. were recorded in Swakopmund as very skilled predators of birds, even those nesting in palms. It will be, therefore, interesting to ensure that the urban refugium is not an ephemeral population sink.

The Cape Wagtail occurs in most southern African towns, but nowhere was its density higher than in Swakopmund (Kopij 2001, 2015). This species occurs also outside the city, along some beaches with rocks, but even there its density is not as high as that recorded in the town (own observ.).

The House Sparrow is an exotic species in Swakopmund, and in Namibia at large. It reached Namibia from the south in the early 1960's (Uys 1962, Winterbottom 1965). At present it is a common resident breeding in most Namibian towns, including those in the far north (Kopij 2014). In Swakopmund, it is almost as common as the indigenous Cape Sparrow in the town centre and in poorer residential areas with sparse vegetation, but it is still much less numerous than the Cape Sparrow in the well-vegetated residential areas.

It can be concluded that the avian community in Swakopmund shows many traits typical for other cities in the world, but it has also some specific characteristics. These probably result from the fact that the

town can be seen, from the ecological point of view, as an oasis among a hyper-arid desert natural environment, and may attract birds which otherwise could not survive outside the city.

## References

- Becker, P. 1984. Mangrovereiher (*Butorides striatus*) in Swakopmund, S.W.A. *Mitteilungen der Ornithologischen Arbeitsgruppe SWA Wissenschaftliche Gesellschaft* **19(10)**: 1-2.
- Bibby, C. J., Burgess, N. D. and Hill, D. A. 1992. *Bird census techniques*. Academic Press, London.
- Chace, J. F. and Walsh J. J. 2006. Urban effects on native avifauna: a review. *Landscape & Urban Planning* **74**: 46-69.
- Crooks, K. R., Suarez, A. V. and Bolger, D. T. 2004. Avian assemblages along a gradient of urbanization in a highly fragmented landscape. *Biological Conservation* **115**: 451-562.
- Dunn A. M. and Weston M. A. 2008. Review of terrestrial bird atlases of the world and their application. *Emu* **108**: 42-67.
- Kopij, G. 2001. *Atlas of Birds of Bloemfontein*. Roma. (Lesotho)/Bloemfontein (RSA): Department of Biology, National University of Lesotho/Free State Bird Club.
- Kopij, G. 2015. Avian diversity in an urbanized South African grassland. *Zoology & Ecology* **25**: 87-100.
- Kopij, G. 2016. Birds of Katima Mulilo town, Zambezi Region, Namibia. *International Science & Technology Journal of Namibia* **7**: 85-102.
- Luniak, M. 2013. Kartograficzne atlasy awifauny miast w Europie – przegląd badań. *Ornis Polonica* **54**: 40-49.
- Luniak, M. 2017. Urban ornithological atlases in Europe: a review. In: Murgui E. and Hedblom H. (eds.). *Ecology and conservation of birds in urban environments*. Springer, Heidelberg. p. 209-223.
- Luniak, M., Kozłowski, P., Nowicki, W. and Plit J. 2001. *Ptaki Warszawy 1962-2000*. IGiPZ PAN, Warszawa.
- Magle, S. B., Hunt, V. M., Vernon, M. and Crooks, K. R. 2012. Urban Wildlife Research: Past, Present, and Future. *Biological Conservation* **155**: 23-32.
- Mitschke, A. and Baumung, S. 2001. Brutvögel-Atlas Hamburg. *Hamburger Avifaunistische Beiträge* **31**.
- Montier, D. J. 1977. *Atlas of breeding birds of the London Area*. London Natural History Soc., London.
- Otto, W. and Witt, K. 2002. Verbreitung und Bestand Berliner Brutvögel. *Berliner Ornithologische Berichte* **12** Sonderheft.
- Uys, C. J. 1962. House Sparrow *Passer domesticus* in Grünau, S.W.A. *Ostrich* **33**: 39.
- Winterbotom, J. M. 1965. House sparrow in Kalkrand. *Ostrich* **36**: 91.

Table 1. Number of pairs, population densities and dominance of birds breeding in Swakopmund (ca. 415 ha) in the austral summer 2016/2017. (Eudominant and dominant species are indicated in bold).

Species	Pairs	Pairs/100 ha	Dominance (%)
<b>Cape Sparrow</b> <i>Passer melanurus</i>	<b>269</b>	<b>64.8</b>	<b>27.7</b>
<b>Laughing Dove</b> <i>Streptopelia senegalensis</i>	<b>195</b>	<b>47.0</b>	<b>20.1</b>
<b>Rock Dove</b> <i>Columba livia</i>	<b>134</b>	<b>32.3</b>	<b>13.8</b>
<b>Common Waxbill</b> <i>Estrilda astrild</i>	<b>99</b>	<b>23.9</b>	<b>10.2</b>
<b>Southern Masked Weaver</b> <i>Ploceus velatus</i>	<b>72</b>	<b>17.3</b>	<b>7.4</b>
<b>House Sparrow</b> <i>Passer domesticus</i>	<b>69</b>	<b>16.6</b>	<b>7.1</b>
Cape Wagtail <i>Motacilla capensis</i>	44	10.6	4.5
Speckled Pigeon <i>Columba guinea</i>	21	5.1	2.2
Helmeted Guineafowl <i>Numida meleagris</i>	19	4.6	2.0
Orange River White-eye <i>Zosterops pallidus</i>	15	3.6	1.5
Dusky Sunbird <i>Cinnyris fuscus</i>	13	3.1	1.3
African Red-eyed Bulbul <i>Pycnonotus nigricans</i>	9	2.2	0.9
Red-faced Mousebird <i>Urocolius indicus</i>	6	1.4	0.6
Grey Go-away-bird <i>Corythaixoides concolor</i>	2	0.5	0.2
White-backed Mousebird <i>Colius colius</i>	2	0.5	0.2
Southern Fiscal <i>Lanius collaris</i>	1	0.2	0.1
Familiar Chat <i>Cercomela familiaris</i>	1	0.2	0.1
Peregrine Falcon <i>Falco peregrinus</i>	1?	0.2	0.1
<b>Total</b>	<b>972</b>	<b>234.2</b>	<b>100</b>



**Figure 1:** Distribution of Peregrine Falcon.



**Figure 3:** Distribution of Speckled Pigeon.



**Figure 2:** Distribution of Helmeted Guineafowl.



**Figure 4:** Distribution of Rock Dove (Feral Pigeon).



**Figure 5:** Distribution of Laughing Dove.



**Figure 7:** Distribution of Red-faced Mousebird.



**Figure 6:** Distribution of Grey Go-away-bird.



**Figure 8:** Distribution of White-backed Mousebird.



**Figure 9:** Distribution of Cape Wagtail.



**Figure 11:** Distribution of Familiar Chat.



**Figure 10:** Distribution of African Red-eyed Bulbul.



**Figure 12:** Distribution of Southern Fiscal.



**Figure 13:** Distribution of Dusky Sunbird.



**Figure 15:** Distribution of House Sparrow.



**Figure 14:** Distribution of Orange River White-eye.



**Figure 16:** Distribution of Cape Sparrow.



**Figure 17:** Distribution of Southern Masked Weaver.



**Figure 18:** Distribution of Common Waxbill.