

# **Biodiversity Observations**

http://bo.adu.org.za



# An electronic journal published by the Animal Demography Unit at the University of Cape Town

The scope of Biodiversity Observations consists of papers describing observations about biodiversity in general, including animals, plants, algae and fungi. This includes observations of behaviour, breeding and flowering patterns, distributions and range extensions, foraging, food, movement, measurements, habitat and colouration/plumage variations. Biotic interactions such as pollination, fruit dispersal, herbivory and predation fall within the scope, as well as the use of indigenous and exotic species by humans. Observations of naturalised plants and animals will also be considered. Biodiversity Observations will also publish a variety of other interesting or relevant biodiversity material: reports of projects and conferences, annotated checklists for a site or region, specialist bibliographies, book reviews and any other appropriate material. Further details and guidelines to authors are on this website.

Lead Editor: Arnold van der Westhuizen – Paper Editor: H Dieter Oschadleus

# BIBLIOGRAPHY: RESEARCH PAPERS AND POSTGRADUATE THESES WHICH HAVE BEEN LARGELY DEPENDENT ON DATA FROM THE SOUTHERN AFRICAN BIRD ATLAS PROJECTS

## Les G Underhill

Recommended citation format:

**Underhill LG** 2016. Bibliography: Research papers and postgraduate theses which have been largely dependent on data from the Southern African Bird Atlas Projects. Biodiversity Observations 7.43: 1–13.

URL: http://bo.adu.org.za/content.php?id= 236

Published online: 7 August 2015

# BIBLIOGRAPHY

# BIBLIOGRAPHY: RESEARCH PAPERS AND POSTGRADUATE THESES WHICH HAVE BEEN LARGELY DEPENDENT ON DATA FROM THE SOUTHERN AFRICAN BIRD ATLAS PROJECTS

Les G Underhill

Animal Demography Unit, Department of Biological Sciences, University of Cape Town, Rondebosch, 7701 South Africa

Email: les.underhill@uct.ac.za

#### Introduction

The databases of the two bird atlas projects in southern Africa have been widely used in research, as a resource both for papers and postgraduate projects. The scope and the volume of the applications of these two databases are almost certainly exceptional in relation to similar projects worldwide. This collection of papers is a monument to the citizen scientists who collected the overwhelming bulk of the data.

From the Animal Demography Unit side, we are extremely grateful to all the researchers and students who have chosen these data to illustrate their ideas, test hypothesis in ecological theory, develop models, and draw inferences. There is no doubt that these projects and their databases have not only benefited academic research, but also the birds themselves. Theories in biodiversity conservation have tested using the bird atlas data; the ideas which turn out to be practical finally get implemented on the ground. For example, in her PhD thesis, Ana Rodrigues, University of Sheffield, developed new algorithms for the efficient selection of nature reserves (Rodrigues 2002). A concept which starts out in a PhD thesis, ultimately gets adopted in practice, to the benefit of biodiversity conservation.

The primary data collection period for the first bird atlas project (then referred to as the Southern African Bird Atlas Project, SABAP, and now known as SABAP1) was 1987–91, and incorporated data from as far back as 1980, and in some regions included data until 1993 (Harrison & Underhill 1987). The SABAP1 database consists of 7.3 million records of bird distribution for Botswana, Lesotho, Namibia, South Africa, Swaziland and Zimbabwe, collected using a 15 minute grid (and a 30 minute grid in Botswana) (Harrison & Underhill 1997). The two introductory chapters to the published atlas (Harrison et al. 1997a, b) contain important background information on the project methods and the limitations to data interpretation, and a useful summary of the geographical backdrop to the project (Harrison & Underhill 1997, Allan et al. 1997). Both chapters are available on the ADU website; see the References.

Data collection for the Second Southern African Bird Atlas Project (SABAP2) commenced in July 2007. In June 2015, the project completed its 10th year of data collection (Underhill & Brooks 2016), and is currently in its 10th year. By early August 2016, more than nine million records of bird distribution were in the SABAP2 database. The spatial scale is nine times finer than that of SABAP2, and uses a five-minute grid (Underhill 2016).

This paper provides a bibliography of published research which undertook extensive analyses of data from the First or Second Southern African Bird Atlas Projects (SABAP1 or SABAP2). For the papers and theses listed, the criterion for inclusion was that bird atlas data were pivotal to underpin the publication. Papers are listed by year; theses are listed in alphabetical order.

In addition, publications relating to SABAP2 are contained in the ADU's ejournal, Biodiversity Observations (previously Ornithological Observations). These were not refereed papers, and it was therefore deemed inappropriate to include them in the bibliography itself. They are listed in a separate section after the theses. Several of these



papers relate to comparisons, for particular quarter degree grid cells, between the observations made during the SABAP1 and during SABAP2

This bibliography is inevitably incomplete. Details of papers which have been omitted can be emailed to <u>les.underhill@uct.ac.za</u> and will be included as supplements to this paper.

#### Acknowledgements

Arjun Amar, Brian Huntley, Dieter Oschadleus, Marc Herremans and Res Altwegg have helped make this list as complete as feasible. Thousands of citizen scientists created these databases. The bibliography is a celebration of citizen science.

#### References

## Allan DG, Harrison JA, Herremans M, Navarro RA, Underhill LG

1997. Introduction and methods. In Harrison JA, Allan DG, Underhill LG, Herremans M, Tree AJ, Parker V, Brown CJ (eds) The atlas of southern African birds. Vol. 1: Non-passerines. Johannesburg: BirdLife South Africa: Ixv-ci. Available online at

http://www.adu.uct.ac.za/sites/default/files/image\_tool/images/352/pa st\_projects/sabap\_1/SABAP1\_Introduction.pdf.

**Harrison JA, Underhill LG** 1997. Introduction and methods. In Harrison JA, Allan DG, Underhill LG, Herremans M, Tree AJ, Parker V, Brown CJ (eds) The atlas of southern African birds. Vol. 1: Non-passerines. Johannesburg: BirdLife South Africa: xliii–lxiv. Available online at

http://www.adu.uct.ac.za/sites/default/files/image\_tool/images/352/pa st\_projects/sabap\_1/SABAP1\_Geography.pdf

**Rodrigues A** 2002. The selection of networks of nature reserves. PhD, University of Sheffield.

**Underhill LG, Brooks M** 2016. SABAP2 after nine years, mid 2007– mid 2016: coverage progress and priorities for the Second Southern African Bird Atlas Project. Biodiversity Observations 7.37: 1–17. Available online at http://bo.adu.org.za/content.php?id=230.

**Underhill LG** 2016. The fundamentals of the SABAP2 protocol. Biodiversity Observations 7.42: 1–12. Available online at <u>http://bo.adu.org.za/content.php?id=235</u>.



# Bibliography of the Southern African Bird Atlas Projects

Papers and books

1988

**Underhill LG, Hockey PAR** 1988. The potential of the Southern African Bird Atlas Project for long-term population monitoring. In: Macdonald IAW, Crawford RJM (eds) Long-term data series relating to southern Africa's renewable natural resources. South African National Scientific Programmes Report 157: 468–475.

#### 1989

**Harrison JA** 1989. Atlassing as a tool in conservation, with special reference to the Southern African Bird Atlas Project. In: Huntley BJ (ed.) Biotic diversity in southern Africa. Cape Town: Oxford University Press: 157–169.

#### 1990

**Brown CJ** 1990. Birds of the West Caprivi Strip, Namibia. Lanioturdus 25: 22–37.

**Underhill LG** 1990. Movements, site-faithfulness and biometrics of European Bee-eaters *Merops apiaster* in the southwestern Cape. Ostrich 61: 80–84.

#### 1991

**Brown CJ** 1991. Birds of the Brandberg and Spitzkoppe. Lanioturdus 26: 25–29.

**McNeill L** 1991. Interpolation and smoothing of binomial data for the Southern African Bird Atlas Project. South African Statistical Journal 25: 120–136.

#### 1992

Harrison JA, Allan DG, Martinez P 1992. The distribution and relative abundance of cranes in South Africa as assessed by bird atlas data. In: Porter DJ, Craven HS, Johnson DN, Porter MJ (eds), Proceedings of the First Southern African Crane Conference. Durban: Southern African Crane Foundation: 79-81.

**Underhill LG, Prys-Jones RP, Harrison JA, Martinez P** 1992. Seasonal patterns of occurrence of Palaearctic migrants in southern Africa using atlas data. Ibis 134 Supplement 1: 99–108.

#### 1993

**Brown CJ** 1993. Birds of the upper Huab River catchment, Cunene Province. Lanioturdus 27: 40–46.

**Brown CJ** 1993. The birds of Owambo, Namibia. Madoqua 18: 147–161.

**Navarro RA, Harrison JA, Allan DG, Zucchini W** 1993. Correlating relative abundance and rainfall: a timeseries analysis of checklists. Proceedings of the Pan-African Ornithological Congress 8: 379–388.



#### 1994

Harrison JA, Allan DG, van Hensbergen HJ 1994. Automated habitat annotation of bird species lists – an aid to environmental consultancy. Ostrich 65: 316–328.

**Harrison JA, Navarro RA** 1994. Modelled reporting rates as indices of change in relative abundance with altitude and season. In: Hagemeijer EJM, Verstrael TJ (eds) Bird Numbers 1992: Proceedings of the 12th International Conference of the EBCC and EOAC. Voorburg, Heerlen, The Netherlands: Statistics Netherlands: 607–618.

**Allan DG** 1994. The abundance and movements of Ludwig's Bustard *Neotis Iudwigii*. Ostrich 65: 95–105.

**Berruti A, Harrison JA, Navarro RA** 1994. Seasonal migration of terrestrial birds along the southern and eastern coasts of southern Africa. Ostrich 65: 54–65.

**Jenkins AR** 1994. The influence of habitat on the distribution and abundance of Peregrine and Lanner Falcons in South Africa. Ostrich 65: 281–290.

#### 1995

**Harrison JA, Martinez P** 1995. Measurement and mapping of avian diversity in southern Africa: implications for conservation planning. Ibis 137: 410–417.

**Lombard AT** 1995. The problems with multi-species conservation: do hotspots, ideal reserves and existing reserves coincide? South African Journal of Zoology 30: 145–163.

**Robertson A, Simmons RE, Jarvis AM, Brown CJ** 1995. Can bird atlas data be used to estimate population size? A case study using Namibian endemics. Biological Conservation 71: 87–95.

#### 1996

**Parker V** 1996. Modelling the distribution of bird species in Swaziland in relation to environmental variables. Ostrich 67: 105–110.

#### 1997

**Allan DG** 1997. Movements of the Blue Crane *Anthropoides paradisea* (Aves: Gruidae) in South Africa as assessed by bird-atlas data and road counts. Durban Museum Novitates 22: 43–52.

Allan DG, Harrison JA, Navarro RA, van Wilgen BW, Thompson MW 1997. The impact of commercial afforestation on bird populations in Mpumalanga province, South Africa: insights from the bird atlas data. Biological Conservation 79: 173–185.

**Brown CJ, Robson N, Yates M** 1997. Distribution, status and the first breeding record of Grey Kestrel in southern Africa. Journal of African Raptor Biology 10: 52–57.

**Dean WRJ, Siegfried WR** 1997. The protection of endemic and nomadic avian diversity in the Karoo, South Africa. South African Journal of Wildlife Research 27: 11–21.

**Dean WRJ** 1997. The distribution and biology of nomadic birds in the Karoo, South Africa. Journal of Biogeography 24: 769–779.

Harrison JA, Allan DG, Underhill LG, Herremans M, Tree AJ, Parker V, Brown CJ (eds) 1997. The atlas of southern African birds. Vol. 1: Non-passerines. Johannesburg: BirdLife South Africa



Harrison JA, Allan DG, Underhill LG, Herremans M, Tree AJ, Parker V, Brown CJ (eds) 1997. The atlas of southern African birds. Vol. 2: Passerines. Johannesburg: BirdLife South Africa

#### 1998

**Barnard P, Brown CJ, Jarvis AM, Robertson A, van Rooyen L** 1998. Extending the Namibian protected area network to safeguard hotspots of endemism and diversity. Biodiversity and Conservation 7: 531–547.

**Barnes KN** (ed.) 1998. The Important Bird Areas of southern Africa. Johannesburg: BirdLife South Africa

**Brown CJ** 1998. Bird diversity. In Barnard, P (ed.) Biological diversity in Namibia – a country study. Windhoek: Namibia National Biodiversity Task Force: 155–162.

**Herremans M** 1998. Conservation status of birds in Botswana in relation to land use. Biological Conservation 86: 139–160.

**Robertson A, Jarvis AM, Brown CJ, Simmons RE** 1998. Avian diversity and endemism in Namibia: patterns from the Southern African Bird Atlas Project. Biodiversity and Conservation 7: 495–511.

**Underhill LG, Herremans M, Navarro RA, Harrison JA** 1998. Where do Palearctic migrant passerines concentrate in southern Africa during the austral summer? In: Spina F, Grattarola A (eds) Proceedings of the first meeting of the European Ornithologists' Union. Biologia e Conservazione della Fauna 102: 168–174.

#### 1999

Harrison JA, Navarro, R 1999. Is size important? Preliminary implications from the Birds in Reserves Project for the Woodland

Biome. In: Adams NJ, Slotow RH (eds) Proceedings of the 22nd International Ornithological Congress, Durban. Johannesburg: BirdLife South Africa: 1538–1545.

Herremans M, Philogene D, Underhill GD, Raijmakers JMH, Underhill LG, Johnson D, Bernitz H, Bernitz Z, Bowker MB, de Beer SJ 1999. Description of a new taxon *brookei* of Levaillant's Cisticola *Cisticola tinniens* from the Western Cape, South Africa. Ostrich 70: 164–172.

**Parker V** 1999. The use of logistic regression in modelling the distribution of bird species in Swaziland. South African Journal of Zoology 34:39–47.

#### 2000

**Barnes KN** (ed.) 2000. The Eskom Red Data Book of birds of South Africa, Lesotho and Swaziland. Johannesburg: BirdLife South Africa.

**Dean WRJ** 2000. Alien birds in southern Africa: what factors determine success? South African Journal of Science 96: 9–14.

**Dean WRJ** 2000. Factors affecting bird diversity patterns in the Karoo, South Africa. South African Journal of Science 96: 609–616.

**Underhill LG** 2000. Waders (Charadrii) from the northern hemisphere in southern Africa. In Ebbinge BS, Mazourov YuL, Tomkovich PS (eds) Heritage of the Russian Arctic: Research, conservation and international co-operation. Moscow: Ecopros Publishers: 476–482.

**Reyers B, van Jaarsveld AS, Kruger M** 2000. Complementarity as a biodiversity indicator strategy. Proceedings of the Royal Society of London B 267: 505–513.

#### 2001

**Fairbanks DHK, Reyers B, van Jaarsveld AS** 2001. Species and environment representation: selecting reserves for the retention of avian diversity in KwaZulu-Natal, South Africa. Biological Conservation 98: 365–379.

**Gaston KJ, Rodrigues ASL, van Rensburg BJ, Koleff P, Chown SL** 2001. Complementary representation and zones of ecological transition. Ecology Letters 4: 4–9.

**Kemp AC, Herholdt JJ, White I, Harrison JA** 2001. Birds of the two largest national parks in South Africa: a method to generate estimate of population size for all species and assess their conservation ecology. South African Journal of Science 97: 393–403.

Jarvis AM, Robertson A, Brown CJ, Simmons RE 2001. Namibian avifaunal database. Directorate of Environmental Affairs, Ministry of Environment & Tourism: Windhoek.

#### 2002

**Bonn A, Rodrigues ASL, Gaston KJ** 2002. Threatened and endemic species: are they good indicators of patterns of biodiversity on a national scale? Ecology Letters 5: 733–741.

**Fairbanks DHK, Kshatriya M, van Jaarsveld AS, Underhill LG** 2002. Scales and consequences of human land transformation on South African avian diversity and structure. Animal Conservation 8: 61–73.

**Reyers B, Fairbanks DHK, Wessels KJ, van Jaarsveld AS** 2002. A multicriteria approach to reserve selection: addressing long-term biodiversity maintenance. Biodiversity and Conservation 11: 769–793.

**Rodrigues ASL, Gaston KJ** 2002. Rarity and conservation planning across geopolitical units. Conservation Biology 16: 674–682.

**van Rensburg BJ, Chown SL, Gaston KJ** 2002. Species richness, environmental correlates, and spatial scale; a test using South African birds. American Naturalist 159: 566–577.

2003

**Chown SL, van Rensburg BJ, Gaston KJ, Rodrigues ASL, van Jaarsveld AS** 2003. Species richness, human population size and energy: conservation implications at a national scale. Ecological Applications 13: 1233–1241.

**Gaston KJ, Rodrigues ASL** 2003. Reserve selection in regions with poor biological data. Conservation Biology 17: 188–195.

#### 2004

**Bonn A. Storch D, Gaston KJ** 2004. Structure of the speciesenergy relationship. Proceedings of the Royal Society, London B. 271: 1685–1691.

**Fairbanks DHK** 2004. Regional land-use impacts affecting avian richness patterns in southern Africa – insights from historical avian atlas data. Agriculture, Ecosystems and Environment 101: 269–288.

**Lennon JJ, Koleff P, Greenwood JJD, Gaston KJ** 2004. Contribution of rarity and commonness to patterns of species richness. Ecology Letters 7: 81–87.

**McPherson JM, Jetz W, Rogers DJ** 2004. The effects of species' range sizes on the accuracy of distribution models: ecological phenomenon or statistical artefact? Journal of Applied Ecology 41: 811–823.



Simmons RE, Barnard P, Dean WRJ, Midgley GF, Thuiller W, Hughes G 2004. Climate change and birds: perspectives and prospects from southern Africa. Ostrich 75: 295–308.

van Rensburg BJ, Erasmus BFN, van Jaarsveld AS, Gaston KJ, Chown SL 2004. Conservation during times of change: correlations between birds, climate and people in South Africa. South African Journal of Science 100: 266–272.

van Rensburg BJ, Koleff P, Gaston KJ, Chown SL 2004. Spatial congruence of ecological transition at the regional scale in South Africa. Journal of Biogeography 31: 843–854.

#### 2005

**Bonn A, Gaston KJ** 2005. Capturing biodiversity: selecting priority areas for conservation using different criteria. Biodiversity and Conservation 14: 1083–1100.

Hockey PAR, Dean WRJ, Ryan PG (eds) 2005. Roberts birds of southern Africa. 7th ed. Cape Town: John Voelcker Bird Book Fund.

#### 2006

**Evans KL, Rodrigues ASL, Chown SL, Gaston KJ** 2006. Protected areas and regional avian species richness in South Africa. Biology Letters 2: 184–188.

**Evans KL, van Rensburg BJ, Gaston KJ, Chown SL** 2006. People, species richness and human population growth. Global Ecology and Biogeography 15: 625–636.

**Oschadleus HD, Underhill LG** 2006. Range expansion of the Redbilled Quelea, *Quelea quelea*, into the Western Cape, South Africa. South African Journal of Science 102: 12–14.

#### 2007

**Erni B, Altwegg R, Underhill LG** 2007. An index to compare geographical distributions of species. Diversity and Distributions 13: 829–835.

**McPherson JM, Jetz W** 2007. Effect of species' ecology on the accuracy of distribution models. Ecography. 30: 135–151

**McPherson JM, Jetz W** 2007. Type and spatial structure of distribution data and the perceived determinants of geographical gradients in ecology: the species richness of African birds. Global Ecology and Biogeography.

**Peacock MP, van Rensburg BJ, Robertson MP** 2007. The distribution and spread of the invasive alien Common Myna, *Acridotheres tristis* L. (Aves: Sturnidae), in southern Africa. South African Journal of Science 103: 465–473.

#### 2008

Altwegg R, Wheeler M, Erni B 2008. Climate and the range dynamics of species with imperfect detection. Biology Letters 4: 581–584.

**Cumming GS, Hockey PAR, Bruinzeel LW, du Plessis MA** 2008. Wild bird movements and avian influenza risk mapping in southern Africa. Ecology and Society 13: 26. URL [online URL: http://www.ecologyandsociety.org/vol13/iss2/art26/]

**Greve M, Gaston KJ, van Rensburg BJ, Chown SL** 2008. Environmental factors, regional body size distributions and spatial variation in body size of local avian assemblages. Global Ecology and Biogeography 17: 514–523.



Harrison JA, Underhill LG, Barnard P 2008. The seminal legacy of the Southern African Bird Atlas Project. South African Journal of Science 102: 82–84.

**Hugo S, van Rensburg BJ** 2008. The maintenance of a positive spatial correlation between South African bird species richness and human population density. Global Ecology and Biogeography 17:, 611–621.

**Okes NC, Hockey PAR, Cumming GS** 2008. Habitat use and life history as predictors of bird responses to habitat change. Conservation Biology 22:151–162.

#### 2009

**van Rensburg BJ, Levin N, Kark S** 2009. Spatial congruence between ecotones and range-restricted species: implications for conservation biogeography at the sub-continental scale. Diversity and Distributions 15: 379–389.

#### 2010

Huntley B, Barnard P, Altwegg R, Chambers L, Coetzee BWT, Gibson L, Hockey PAR, Hole DG, Midgley GF, Underhill LG, Willis SG 2010. Beyond bioclimatic envelopes: Dynamic species' range and abundance modelling in the context of climatic change. Ecography 33: 621–626.

#### 2012

Altwegg R, Broms K, Erni B, Barnard P, Midgley GF, Underhill LG 2012. Novel methods reveal shifts in migration phenology of Barn

Swallows in South Africa. Proceedings of the Royal Society of London B 279: 1485–1490.

Huntley B, Altwegg R, Barnard P, Collingham YC, Hole DG 2012. Modelling relationships between species spatial abundance patterns and climate. Global Ecology and Biogeography 21: 668–681.

**Huntley B, Barnard P** 2012. Potential impacts of climatic change on southern African birds of fynbos and grassland biodiversity hotspots. Diversity and Distributions 18: 769–781.

#### 2013

**Bled F, Nichols JD, Altwegg R** 2013. Dynamic occupancy models for analyzing species' range dynamics across large geographic scales. Ecology and Evolution 3: 4896–4909.

Huntley B, Allen JRM, Barnard P, Collingham YC, Holliday PR 2013. Species' distribution models indicate contrasting late-Quaternary histories for southern and northern hemisphere bird species. Global Ecology and Biogeography 22: 277–288.

#### 2014

Altwegg R, West AG, Gillson L, Midgley GF 2014. Impacts of climate change in the Greater Cape Floristic Region. In: Allsopp N, Colville JF, Verboom GA (eds) Fynbos: Ecology, Evolution and Conservation of a Megadiverse Region. Oxford University Press, Oxford: 299–320.

Broms KM, Johnson DS, Altwegg R, Conquest LL 2014. Spatial occupancy models applied to atlas data show Southern Ground



Hornbills strongly depend on protected areas. Ecological Applications 24: 363–374.

Collingham YC, Huntley B, Altwegg R, Barnard P, Beveridge OS, Gregory RD, Mason LR, Oschadleus HD, Simmons RE, Willis SG, Green RE 2014. Prediction of mean adult survival rates of southern African birds from demographic and ecological covariates. Ibis 156: 741–754.

**Hofmeyr SD, Symes CT, Underhill LG** 2014. Secretarybird *Sagittarius serpentarius* population trends and ecology: insights from South African citizen science data. PLoS ONE 9(5): e96772

Huntley B, Midgley GF, Barnard P, Valdes PJ 2014. Sub-orbital climatic variability and centres of biological diversity in the Cape region of southern Africa. Journal of Biogeography, 41, 1338–1351.

### 2015

**Bussière EMS, Underhill LG, Altwegg R** 2015. Patterns of bird migration phenology in South Africa suggest northern hemisphere climate as the most consistent driver of change. Global Change Biology 21: 2179–2190.

Marnewick MD, Retief EF, Theron NT, Wright DR, Anderson TA 2015. Important Bird and Biodiversity Areas of South Africa. Johannesburg: BirdLife South Africa.

**Péron G, Altwegg R** 2015a Departures from the energy-biodiversity relationship in South African passerines: are the legacies of past climates mediated by behavioral constraints on dispersal? PIoS ONE 10; e0133992.

**Péron G, Altwegg R** 2015b. Low vertebrate diversity in the fynbos plant diversity hotspot: the Quaternary legacy hypothesis discussed using current Passeriformes distributions. Ecography 38: 992–997.

**Péron G, Altwegg R** 2015c. The abundant centre syndrome and species distributions: insights from closely related species pairs in southern Africa. Global Ecology and Biogeography 24: 215–225.

**Péron G, Altwegg R** 2015d. Twenty-five years of change in southern African passerine diversity: non-climatic factors of change. Global Change Biology 21: 3347–3355.

**Taylor MR, Peacock F, Wanless RM (eds)** 2015. The 2015 Eskom Red Data Book of birds of South Africa, Lesotho ans Swaziland. BirdLife South Africa, Johannesburg.

**Seymour CL, Simmons RE, Joseph GS, Slingsby JA** 2015. On bird functional diversity: species richness and functional differentiation show contrasting responses to rainfall and vegetation structure in an arid landscape. Ecosystems 18: 971–984.

Wright D, Knight AT, Keene M, Underhill LG 2015. Understanding the motivations and satisfactions of volunteers to improve the effectiveness of citizen science programs. Society & Natural Resources 28: 1013–1029.

#### 2016

**Amar A, Cloete D, Whittington M** 2016. Using independent nest survey data to validate changes in reporting rates of Martial Eagles between the Southern African Bird Atlas Project 1 and 2. Ostrich 87: 1–5.

**Broms KM, Hooten MB, Johnson DS, Altwegg R, Conquest LL** 2016. Dynamic occupancy models for explicit colonization processes. Ecology 97: 194–204.

**Clark AE, Altwegg R, Ormerod JT** 2016. A variational Bayes approach to the analysis of occupancy models. Plos One 11:e0148966.



**Cunningham S, Madden C, Barnard P, Amar A** 2016. Electric crows: power lines, climate change and the emergence of a native invader. Diversity & Distributions 22:17-29.

Huntley B, Collingham YC, Singarayer JS, Valdes PJ, Barnard P, Midgley GF, Altwegg R, Ohlemüller R 2015. Explaining patterns of avian diversity and endemicity: climate and biomes of southern Africa over the last 140,000 years. Journal of Biogeography 43: 874–886.

**Lee ATK, Barnard P** 2016. Endemic birds of the Fynbos biome: a conservation assessment and impacts of climate change. Bird Conservation International 26: 52–68.

**Péron G, Altwegg R, Jamie GA, Spottiswoode C** 2016. Coupled range dynamics of brood parasites and their hosts responding to climate and vegetation changes. Journal of Animal Ecology in press

## PhD and MSc theses which have made extensive use of Southern African Bird Atlas Project data

Allan, David G 1994. Aspects of the biology and conservation status of the Blue Crane *Anthropoides paradiseus*, and the Ludwig's *Neotis ludwigii* and Stanley's *N. denhami stanleyi* Bustards in southern Africa. MSc, University of Cape Town. Available online at <u>http://open.uct.ac.za/bitstream/handle/11427/6218/thesis\_sci\_1993</u> <u>allan\_d\_g.pdf?sequence=1</u>

**Broms, Kristin M** 2013. Using presence-absence data on areal units to model the ranges and range shifts of select South African bird species. PhD Dissertation. University of Washington, Seattle, Washington, USA. Available online at <a href="https://digital.lib.washington.edu/researchworks/bitstream/handle/177">https://digital.lib.washington.edu/researchworks/bitstream/handle/177</a>

3/24102/Broms\_washington\_0250E\_12315.pdf

**Cloete, Daniël** 2013. Investigating the declines of the Martial Eagles in South Africa. MSc, University of Cape Town. Available online at <a href="http://open.uct.ac.za/bitstream/handle/11427/6604/thesis\_sci\_2013\_cloete\_d.pdf?sequence=1">http://open.uct.ac.za/bitstream/handle/11427/6604/thesis\_sci\_2013\_cloete\_d.pdf?sequence=1</a>

**Dean, W Richard J** 1995. Where birds are rare or fill the air: the protection of the endemic and nomadic avifaunas of the Karoo. PhD, University of Cape Town. Available online at <a href="http://open.uct.ac.za/bitstream/handle/11427/9674/thesis\_sci\_1995\_dean\_wri.pdf?sequence=1">http://open.uct.ac.za/bitstream/handle/11427/9674/thesis\_sci\_1995\_dean\_wri.pdf?sequence=1</a>

**Erni, Birgit** 2000. Analysis of distribution maps from bird atlas data: dissimilarities between species, continuity within ranges and smoothing of distribution maps. MSc, University of Cape Town. Available online at



### http://open.uct.ac.za/bitstream/handle/11427/14721/thesis sci 1998 erni\_birgit.pdf?sequence=1

**Greve, Michelle** 2007. Avifaunal responses to environmental conditions and land-use changes in South Africa: diversity, composition and body size. MSc, Stellenbosch University.

**Harrison, James A** 1993 Southern African Bird Atlas Project and its relevance to nature conservation. MSc, University of Stellenbosch.

**Hofmeyr, Sally** 2012. Impacts of environmental change on large terrestrial bird species in South Africa: insights from citizen science data. PhD, University of Cape Town. Available online at <a href="http://open.uct.ac.za/bitstream/handle/11427/12306/thesis\_sci\_2012">http://open.uct.ac.za/bitstream/handle/11427/12306/thesis\_sci\_2012</a> \_\_hofmeyr\_s.pdf?sequence=1

Little, Francesca 2003. The smooth is better than the rough: an exploitation of reporting rate information in southern African bird atlas data. PhD, University of Cape Town. Available online at <a href="http://open.uct.ac.za/bitstream/handle/11427/8592/thesis\_sci\_2003\_little\_f.pdf?sequence=1">http://open.uct.ac.za/bitstream/handle/11427/8592/thesis\_sci\_2003\_little\_f.pdf?sequence=1</a>

**Loftie-Eaton, Megan** 2014. Geographic range dynamics of South Africa's bird species. MSc, University of Cape Town

**Madden, Chrissie** 2013. Understanding the impacts of corvids on biodiversity. MSc, University of Cape Town.

**McNeill, Lindsay** 1994. Topics in interpolation and smoothing of spatial data. PhD, University of Cape Town. Available online at <a href="http://open.uct.ac.za/bitstream/handle/11427/15969/thesis\_sci\_1994">http://open.uct.ac.za/bitstream/handle/11427/15969/thesis\_sci\_1994</a> <a href="mailto:mcneill\_lindsay.pdf?sequence=1">mcneill\_lindsay.pdf?sequence=1</a>

**McPherson, Jana** 2005. Investigating the utility of correlative distribution models to conservation science and macroecology. PhD, University of Oxford.

**Mostert, Esther A** 2012. Prioritising bird species of special concern monitoring and conservation action in protected areas. MSc, University of Cape Town. Available online at

http://open.uct.ac.za/bitstream/handle/11427/10784/thesis\_sci\_2012 mostert\_e.pdf?sequence=1

**Parker, Vincent** 1995. Statistical analysis of bird atlas data from Swaziland. MSc, University of Cape Town. Available online at <u>http://open.uct.ac.za/bitstream/handle/11427/20195/thesis sci 1995</u> <u>parker\_vincent.pdf?sequence=1</u>

**Rodrigues, Ana** 2002. The selection of networks of nature reserves. PhD, University of Sheffield.

**van Rensburg, Berndt J** 2002. Macro-ecology of avian assemblages in South Africa. PhD, University of Pretoria.

**van Schaik, Hanneke J** 2009. Impact of elephants (*Loxodonta africana*) on bird diversity in southern Africa. MSc, University of Wageningen.

Wright, Dale 2011. Evaluating a citizen science research programme: understanding the people who make it possible. MSc, with distinction, University of Cape Town. Available online at <a href="http://open.uct.ac.za/bitstream/handle/11427/10904/thesis.sci">http://open.uct.ac.za/bitstream/handle/11427/10904/thesis.sci</a> 2011 <a href="http://open.uct.ac.za/bitstream/handle/11427/10904/thesis.sci">wright\_d.pdf?sequence=1</a>



## Papers in Biodiversity Observations/Ornithological Observations

**Ainsley J** 2016. The SABAP2 "Four Degrees Blue" project: the challenge to obtain at least 11 checklists in 576 pentads. Biodiversity Observations 7.36: 1–7. Available online at <a href="http://bo.adu.org.za/content.php?id=232">http://bo.adu.org.za/content.php?id=232</a>.

**Carter J** 2012. Somerset West - SABAP1 and SABAP2 compared. Ornithological Observations 3: 253–267. Available online at <u>http://bo.adu.org.za/content.php?id=72</u>.

**de Swardt DH** 2012. 2925BD Hagesdam – SABAP1 and SABAP2 compared. Ornithological Observations 3: 109–122. Available online at <u>http://bo.adu.org.za/content.php?id=51</u>.

**de Swardt DH** 2014. A comparative analysis of SABAP2 data for the Free State National Botanical Gardens and the Valley of Seven Dams Conservancy, Bloemfontein. Ornithological Observations 5: 1–8. Available online at <a href="http://bo.adu.org.za/content.php?id=106">http://bo.adu.org.za/content.php?id=106</a>.

**de Swardt DH** 2014. Bird distribution changes in the Lydenburg area, Mpumalanga (2530AB Lydenburg and 2530BA Long Tom Pass) using SABAP data to compare with historical data: a period since the 1980s. Ornithological Observations 5: 431–439. Available online at

http://bo.adu.org.za/content.php?id=158.

**Loftie-Eaton M** 2015. Comparing reporting rates between the First and Second Southern African Bird Atlas Projects. Ornithological Observations 6: 1–11. Available online at <a href="http://bo.adu.org.za/content.php?id=163">http://bo.adu.org.za/content.php?id=163</a>.

**McKenzie D** 2012. Reporting rate comparisons for birds in the Nelspruit area – SABAP1 vs SABAP2. Ornithological Observations 2: 22–31. Available online at http://bo.adu.org.za/content.php?id=17.

**Oschadleus HD** 2014. Range limits of the Sociable Weaver. Ornithological Observations 6: 19–23. Available online at <u>http://bo.adu.org.za/content.php?id=166</u>.

**Retief EF** 2013. 2528AB Pienaarsrivier – Analysis of SABAP1 and SABAP2 data for the quarter degree square. Ornithological Observations 4: 107–118. Available online at <a href="http://bo.adu.org.za/content.php?id=92">http://bo.adu.org.za/content.php?id=92</a>.

**Underhill LG** 2016. The fundamentals of the SABAP2 protocol. Biodiversity Observations 7.42: 1–12. Available online at <u>http://bo.adu.org.za/content.php?id=235</u>.

**Underhill LG, Harebottle DM, Brooks M** 2012. Second Southern African Bird Atlas Project (SABAP2): Progress report to 6 December 2012. Ornithological Observations 3: 243–250. Available online at <a href="http://bo.adu.org.za/content.php?id=232">http://bo.adu.org.za/content.php?id=232</a>.

**Underhill LG, Spiby J, Fox G** 2014. SABAP2 shows that the Common Myna *Acridotheres tristis* is using the towns and villages as stepping stones to spread across South Africa. Ornithological Observations 5: 453–456. Available online at http://bo.adu.org.za/content.php?id=160.

**Underhill LG, Brooks M** 2014. Preliminary summary of changes in bird distributions between the First and Second Southern African Bird Atlas Projects (SABAP1 and SABAP2). Ornithological Observations 5: 258–293. Available online at http://bo.adu.org.za/content.php?id=134.



**Underhill LG, Brooks M** 2016. SABAP2 after nine years, mid 2007– mid 2016: coverage progress and priorities for the Second Southern African Bird Atlas Project. Biodiversity Observations 7.37: 1–17. Available online at <u>http://bo.adu.org.za/content.php?id=230</u>.