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Ornithological Observations accepts papers containing faunistic information about birds. This includes descriptions of distribution, behaviour, breeding, foraging, food, movement, measurements, habitat and plumage. It will also consider for publication a variety of other interesting or relevant ornithological material: reports of projects and conferences, annotated checklists for a site or region, specialist bibliographies, and any other interesting or relevant material.

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## RANGE LIMITS OF THE SOCIABLE WEAVER


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# RANGE LIMITS OF THE SOCIABLE WEAVER

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*PHOtos of Weaver Nests (PHOWN) is a Virtual Museum, citizen science project of the Animal Demography Unit, to collect and monitor breeding distributions and colony sizes of weaver birds globally. This is the second paper in a series of exciting new results from PHOWN, the first being an introduction to the series (Oschadleus 2014a).*

All the Virtual Museum projects aim to map current distributions of the selected taxa, and sometimes historical distributions by including specimen records. PHOWN aims to map breeding distributions of weavers (Oschadleus 2014a). This will often be similar to the range of the species, but in migrant species such as the three queleas there may be differences in the breeding and full ranges of the species. In addition, PHOWN can provide breeding distributions on a very fine scale, as will be shown in this paper on the Sociable Weaver *Philetairus socius*. Their nests are conspicuous and they often nest along roads, making them easy to observe. Bird distributions are not static – the reasons for changes could include climate change, or man-made changes to the environment, changes in the population numbers, or other factors. The PHOWN database shows different changes happening at different limits of the range of the Sociable Weaver, showing the importance of lots of data from lots of areas.

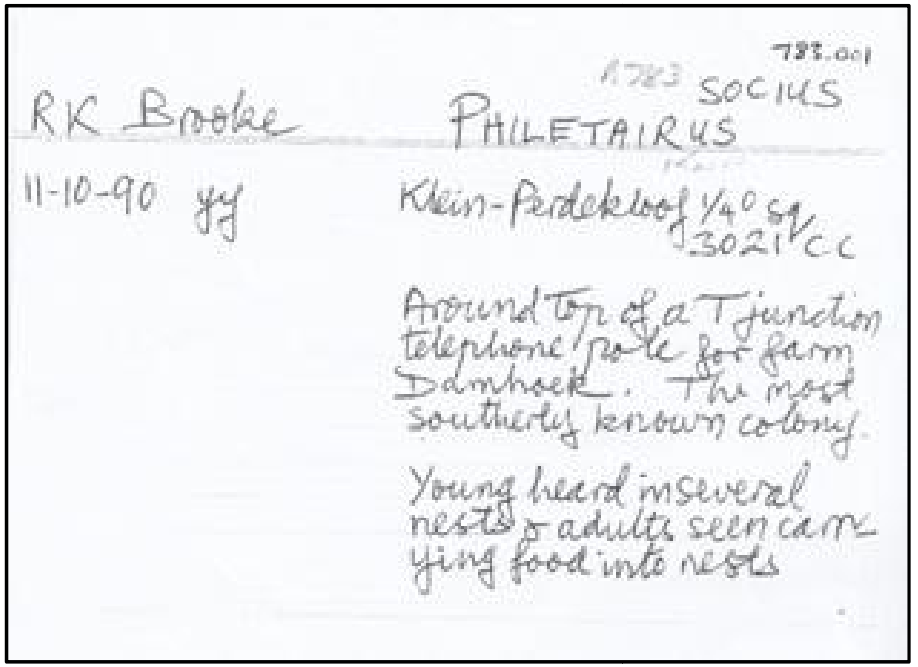


**Fig 1** - Nest Record Card 783.001, showing details of the southernmost Sociable Weaver colony in 1990 on Damhoek farm.

From 21-30 April 2011 and again from 24 May - 6 June 2014 Barry and Sue Shultz and I surveyed the Upper Karoo, Northern Cape, to document as many of the southernmost Sociable weavers as possible, and all these colonies were added to PHOWN.

**Slight range contraction**

The southern global limit of the Sociable Weaver was found by Richard Brooke, while atlassing in 1990 (Nest Record Card 783.001, Fig 1). This colony was not reported on again until 2011 when two colonies were photographed on telephone poles at the farm house (Fig 2-3). The colony closer to the farm house was active (PHOWN 748), and the colony next to the main road was inactive (PHOWN

749). The site was revisited in 2014, and the previously active colony was now missing (PHOWN 11593) as the telephone pole had been removed and the telephone pole next to the road was half dug out with an inactive nest still on top (PHOWN 11592). The next southernmost colony was nearly 2 km NE of this one, and was possibly active in 2011 (PHOWN 750) but by 2014 the nest was on the ground with the telephone pole removed (PHOWN 11897). The southernmost active colonies in this area in 2014 were at Beesdam farm (PHOWN 11596 and others), 4 km NE of Brooke's colony. Thus the southernmost limit was apparently static for two decades but then seems to have moved northwards due to human interference with the nest sites.

**Possible range expansion**

The colonies in the Damhoek-Beesdam area provided the southern global limit for the species, as was recorded in 1990 and 2011. However, in 2013 Japie Claassen reported a colony from the Carnarvon–SKA road that was further south (PHOWN 8892). In 2014 Barry and Sue Shultz and I surveyed the road and found several colonies along the Carnarvon–SKA road and on the Carnarvon–Vanwyksvlei road that are outside the Southern African Bird Atlas Project (SABAP1) range (Fig 3). It is not known if these colonies have been here for a long time, and not been reported, or if the birds moved south in recent years. There are no South African Bird Atlas Project (SABAP2) cards from this area.

**Static range limit**

Another range limit is illustrated by the southernmost colony on the R27 Brandvlei to Kenhardt road. At 96 km north of Brandvlei (towards Kenhardt) is a telephone pole with a Sociable Weaver nest.

**Fig 2** - PHOWN 748 and 749, showing the southernmost Sociable Weaver colonies in 2011.

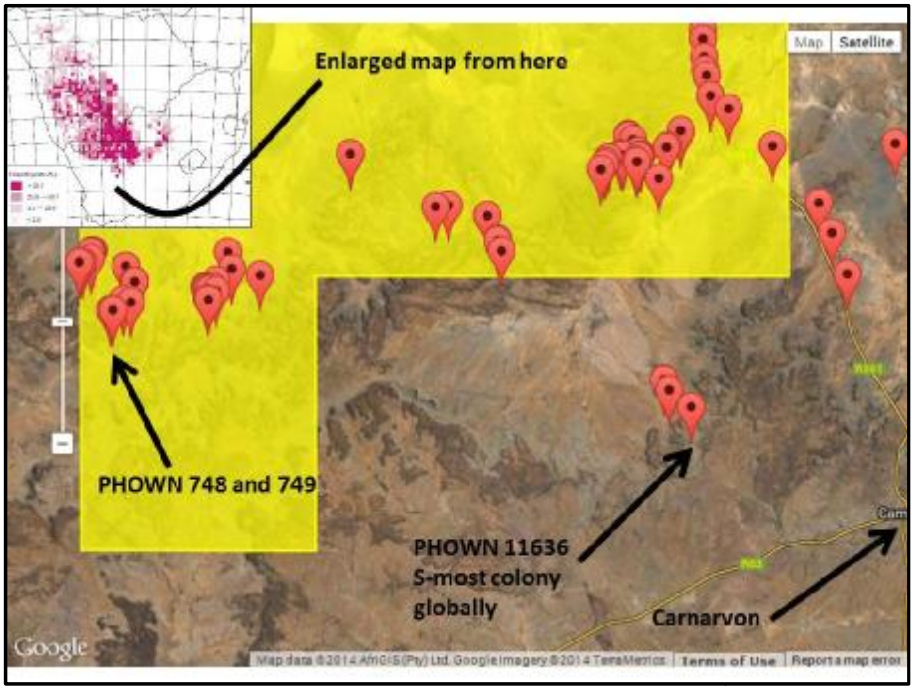


**Fig 3** - Range records of the Sociable Weaver in the southernmost parts of its range. The SABAP1 map is shown in the inset and the yellow grids in the main map section. The red markers are all the PHOWN records in the region. PHOWN 748 and 749 were believed to be the globally southernmost records until recent PHOWN records were documented, and PHOWN 11636 is now the furthest south colony.

This nest has been documented as the southernmost nest along this road for the last 4 years and it is still active (Fig 4). It has decreased in size due to a piece of the nest falling off, as recorded by a time-series of photos by different observers. No photo was taken in 2011 but the colony was recorded as being present. The decrease is confirmed by 2 nest counts, ie 30 chambers in 2010 and 16 in 2014 – chambers were not counted in other years. The nest piece fell off between 29.02.2012 and 29.03.2013 and is visible on the ground in


**Fig 4** - Southernmost Sociable Weaver colony on the R27 Brandvlei to Kenhardt

the 2013 and 2014 photos. This was reported on in a web news report (Oschadleus 2014c), which includes links to the full details of the original records. Thus the southern limit along the R27 has been the same telephone pole for 4 years, and probably for much longer. There is one record from a few kms further south (PHOWN 8439), found on Google Streetview (see also below) but it has not been seen again, so was presumably short-lived.

**Google Streetview**

The second photo in Fig 4 is from Google Streetview, which allowed all colonies along South African tar roads to be documented (Oschadleus 2014b). Untarred roads, Namibia and Botswana have not been covered by Google Streetview yet.

Google Streetview provides a useful baseline of colonies along tarred roads and shows a very large number of colonies along roads in the Northern Cape. In the Free State and North West Provinces, relatively few colonies were found along roads, although colonies are known from untarred roads and farms in these provinces. The results from Google Streetview will be reported on more fully in the future.

**Conclusion**

The Sociable Weaver has been predicted to respond to climate

change by moving southwards (Hockey *et al.* 2011). Underhill and Brooks (2014) indicate a fairly even spread of range changes for this species across its range, in a comparison of reporting rates between SABAP1 and SABAP2. Atlasing is important to detect changes in ranges of birds over time. PHOWN provides an opportunity for anyone to contribute to monitoring these changes on a finer scale. If you are atlassing or birding at the range edge of the Sociable Weaver, please also submit a PHOWN record!

**- oo0oo -**

**Acknowledgements**

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**References**

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**Oschadleus HD 2014b**. Google's roadside Sociable Weavers. (2014-05-15) http://weavers.adu.org.za/newstable.php?id=516

**Oschadleus HD 2014c**. Sociable Weaver colony in a time series. (2014-06-26) http://weavers.adu.org.za/newstable.php?id=532

**Underhill LG and 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. http://oo.adu.org.za/content.php?id=134

**Box 1. Contribute to "PHOtos of Weaver Nests"**

Please record and submit PHOWN records of Sociable Weaver nests (and nests of other weaver species). Of particular interest is an annual record of the first Sociable Weaver colony along a road when you approach the range of this species. No matter if others have recorded it - rather too many repeats than missing records!

Register and upload records at the Virtual Museum website, http://vmus.adu.org.za

View your records, species summaries, and much more on the PHOWN website, http://weavers.adu.org.za/phown.php

**Box 2. PHOWN tip: Navigating the google map on the PHOWN species pages**

See all the PHOWN records for the Sociable Weaver at http://weavers.adu.org.za/phown_sp.php?Spp=783.

- There is a drop-down menu where you can select a different species (and hit the Go button).
- Click between Map and Satellite views on the map.
- Use your mouse (or slidebar on the map) to zoom in or out.
- Click on a red marker on the map to see that PHOWN record in a new tab (showing the photo(s), observer and other details).
- Compare the known range of the species (yellow blob) with the PHOWN records (red markers). This yellow blob can be clicked off (button below map) if you need to see the map details more clearly.
- Drag the Google man to see if there is a Streetview (a cross in the top right hand corner can be clicked to return to the normal view).