

A new longevity record for the Damara Tern *Sternula balaenarum*

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ABSTRACT A Damara Tern ringed as an unfledged chick and fitted with a colour ring in March 2008 in southern Namibia has been regularly observed at a roost near Lüderitz in winter and early spring since 2015. The latest confirmed sighting of this bird was on 2 August 2025, i.e. 17 years and four months since ringing. This constitutes the present longevity record for this species. Fifty-seven sightings of this bird since 2015 between mid-May and early October in southern Namibia indicate that it is highly unlikely that it undertook a winter migration to tropical West Africa, at least in most years, during the period 2015–2025.

KEYWORDS Damara Tern; longevity; migration; Namibia; seabird conservation

INTRODUCTION

The Damara Tern is a near endemic species in Namibia where more than 90% of the total population breeds along the Namib desert coastline (Crawford & Simmons 1997, Simmons 2005, Simmons et al. 2015). The biology of this species is relatively poorly understood due to the remoteness of most of its breeding sites, particularly in southern Namibia. Many Damara Terns have been ringed during the last five decades, particularly along the central coast of Namibia (Braby 2011), including c.1250 birds between 1994 and 2010 (Braby 2010). Unfortunately, the small size of the birds (and rings) makes subsequent identification virtually impossible unless the birds were re-captured or found dead. In more recent years, colour rings were additionally fitted to some birds and facilitated individual identification at a distance (e.g., Braby 2010). Here we present a new longevity

record for the Damara Tern based on one of these colour ring deployments.

STUDY SITE AND METHODS

During a previous study (Braby 2011), several Damara Terns were fitted with colour rings in southern Namibia. These included four unfledged chicks that were ringed between 11 and 22 March 2008 with the unique marking combination of a single yellow colour ring on the left tarsus and a metal ring, engraved with a unique number, on the right tarsus at the !Anichab salt pan (26.264 S, 15.000 E), near Hottentot's Bay, about 43 km north of Lüderitz.

Since mid-2013, the presence and numbers of Damara Terns were regularly monitored on the northern part of the Lüderitz Peninsula in the vicinity of Dias Point (e.g. Roux 2022) along the shores of Shearwater Bay (part of the greater

Lüderitz Bay). Observations were mainly made from a vehicle with 10x40 binoculars, and photographs were taken with a DSLR camera fitted with a 300 mm or a 500 mm zoom lens to document plumage phases and behaviour of the birds, including courtship, mating, provisioning of juveniles, as well as the presence of rings and other marks. To date (August 2025), this intensive monitoring consisted of more than 3 700 visits made to the study site in all months since May 2013.

RESULTS

In August and September 2015 two of the four colour-ringed birds that had been ringed at the !Anichab Salt Pan were sighted and photographed at Shearwater Bay (26.644 S, 15.096 E) among flocks of Damara Terns regularly roosting at the site (Figure 1a). One of these two birds had a characteristic profile due to an apparent thickening of the upper mandible forward of the nares, giving the bill - seen in profile - an accentuated decurved shape compared to most other Damara Terns present at the site (Figure 1b).

In the following years, this bird, identified by the combination of its colour ring and unusual profile, was recorded photographically at the Shearwater Bay roost site in all years except 2016 and 2019. In total there were 57 records of this particular individual at the Shearwater Bay roost site between 4 August 2015 and 2 August 2025. This latest sighting indicates that this bird was banded as an unfledged chick at least 6 342 days (208 months, 17.36 years) prior. This constitutes the longevity record for this species to date.

It is noteworthy that all 57 verified sightings of this bird at the Shearwater Bay roost site were in winter or early spring, between mid-May and early October (Figure 2), at a time when the majority of individuals have migrated to equatorial west Africa, between Nigeria and Liberia (Crawford & Simmons 1997, Gochfeld et al. 2020), or just returning to Namibia from there (in September and October). Forty-one of these records (72%) in nine different years were made in June and July (Figure 2). This suggests that this individual most probably did not migrate northward, at least in most years. Moreover, all these sightings at the Shearwater Bay roost site were made on days when the roost was populated by relatively large numbers of Damara



Figure 1 Photographic records of the colour-ringed bird (yellow ring on the left tarsus) a) at the Shearwater Bay roost site in a flock and b) a profile photograph of the same bird showing the characteristic accentuated decurved bill shape. Both photographs were taken on 12 July 2023.

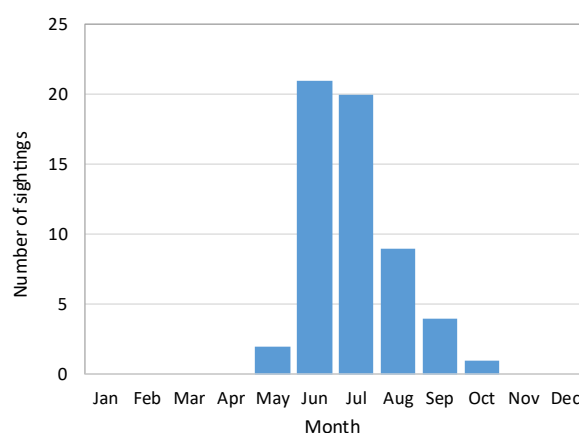


Figure 2 Seasonal distribution (per month) of the 57 sightings of this bird since 2015.

Terns, on average 118 birds ($n = 57$, $SD = 72$, range: 8–314). The average date of these 57 sightings was 13 July ($SD = 31$ days, median: 7 July, range: 15 May–2 October).

DISCUSSION

During previous studies between 2005 and January 2008 colour rings were deployed on Damara Terns of various ages. Among these birds there were 67 individuals fitted with one yellow colour ring or a combination of two colour rings that included a yellow one. These were all marked along the central Namibian coastline (approximately 430 km north of Lüderitz). Furthermore, three breeding adults were ringed with a combination of yellow and green rings at the !Anichab Salt Pan. However improbable, it is not impossible that the bird observed in this study could have been one of these previously marked birds (e.g., having lost one of the colour rings) and relocated to Shearwater Bay in winter, in which case the longevity record described here would be an underestimate, and it could possibly be as old as 20.5 years.

The previous longevity record for this species was 14 years and 11.5 months for a bird ringed as a chick near Swakopmund and re-trapped on the nest as a breeding adult in the same location (Braby 2011). The present result exceeds this by approximately two years and four months. The available longevity records for two other species of the genus *Sternula* exceed our result by slightly less than seven years: *S. albifrons* at 23.9 years (Fransson et al. 2017), and *S. antillarum* at 24.1 years (Klimkiewicz & Fitcher 1989). These differences, compared to our results, may simply reflect the relatively poor research and long-term monitoring efforts in Namibia compared with the more abundant and better studied species in Europe (for *S. albifrons*), or North America (for *S. antillarum*).

Using multi-states capture-mark-recapture models Braby et al. (2011) estimated the annual survival rate of adult Damara Terns in central Namibia as 0.87. Assuming no senescence, that estimate would imply that only 10.8% of adult Damara Terns (aged > 2 years) reach the age of 18 years.

The number of wintering Damara Terns in the Lagos region, Nigeria, was found to be highest between July and September (Wallace 1973).

Repeated sightings of this bird at the Shearwater Bay roost in winter and early spring between mid-May and early October, with an average date in early July, accompanied by up to more than 300 birds, indicate that a fairly large proportion of the southern Namibian Damara Tern population does not migrate northwards in winter and remains in southern Namibia throughout the year. These observations also highlight the Lüderitz Peninsula, and Shearwater Bay in particular, as a very important habitat throughout the year for this near endemic Namibian species.

Seabirds in general are long-lived species (Lack 1968), and a comprehensive understanding of their biology can only be attained through long-term research and monitoring. In addition, our records highlight the value of individual identification marks (such as colour rings) which facilitate identification at a distance without the need to recapture the birds. To that effect a programme was initiated in 2021, aimed at ringing and individually marking Damara Terns with engraved coloured flags to improve our understanding of the biology, movements and migration patterns of this important Namibian species in line with the aims of the Damara Tern Species Action Plan (MEFT 2020).

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