Common TRUTHS

TEXT **PETER RYAN**

Birders love to find rare birds; few things match the excitement of coming across something completely unexpected. But the obsession with rarities can result in population changes in more common birds being overlooked. Breeding bird surveys in Europe, Asia and North America show that many bird populations are in flux, but what do we know about the status of common birds in South Africa?

The best way to tell how birds are faring is through standardised counts of birds at the same sites year after year. In South Africa, Coordinated Avifaunal Road (CAR) counts have shown steady decreases in some large terrestrial species such as Southern Black Korhaan, whereas others exhibit regionally distinct responses. For example, Blue Cranes have decreased in the grassland biome, increased in agricultural areas of the Western Cape and remained more or less constant in the eastern Karoo.

Counts of breeding seabirds and coastal birds also show substantial changes in many species' numbers. The recent decreases in African Penguin, Cape Gannet and Cape and Bank cormorants have attracted widespread attention, with all four species now listed as Endangered. Numbers of coastal birds have remained relatively constant overall, but there has been a marked shift from migrant shorebirds to resident species such as ibises, Egyptian Goose, Blacksmith Lapwing and Cape Wagtail. >

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LEFT The Cattle Egret is one of the bird world's great success stories, having spread throughout much of the planet. Yet atlas data suggest that its numbers are decreasing across South Africa.

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Inland, the numbers of waterbirds at wetlands are captured through Co-ordinated Waterbird Counts (CWAC), but they vary greatly in relation to site-specific changes in water quantity and quality, obscuring broader-scale patterns. The BIRDIE Project (*birdie.sanbi.org.za*) is developing indices of change across all wetlands, but this is a work in progress.

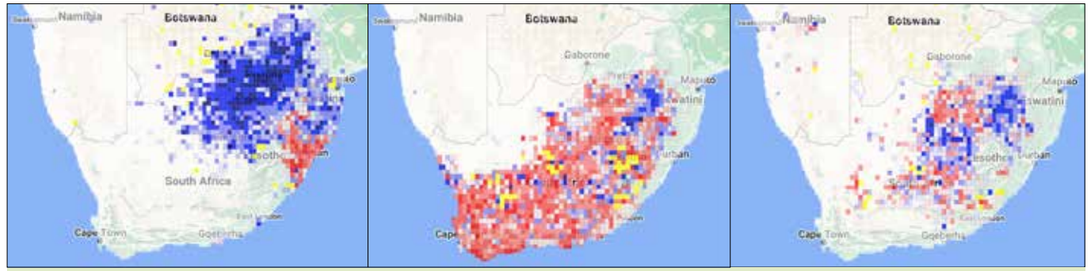
ABOVE The increase in atlas reporting rates of Pale-crowned Cisticolas probably results from improved birding skills and knowledge of its call (McKenzie et al. 2017, *Biodiv. Obs*. 8.15).

OPPOSITE African Palm Swifts continue to expand their range through South Africa thanks at least in part to the widespread planting of ornamental palms. Their success mirrors that of Little Swifts, which spread throughout South Africa in the first half of the 20th century.

What about common land birds? Breeding bird surveys by volunteers, or citizen scientists, started in the UK and North America in the 1960s. Since then, many other countries have adopted similar programmes, allowing region-wide assessments. The general trend across much of the northern hemisphere shows a decrease in many bird species, especially in transformed landscapes where the intensification of agriculture and the increasing use of agrochemicals have impacted birds and their prey. Insectivores and granivores typically have fared poorly, whereas dietary generalists are able to hold their own, or even benefit from these changes.

Unfortunately, bird surveys have not been widely adopted in southern Africa. Standardised point counts have been used to establish baseline population estimates in a few biomes, but there don't appear to be any broad-based citizen science programmes anywhere in the southern hemisphere, let alone in Africa. This mainly reflects the fewer birders and resources in the south. However, an additional challenge is the weaker seasonality in the southern hemisphere, thanks to the much greater area of ocean. In the northern hemisphere, the timing of breeding is much more predictable, which facilitates comparable counts year on year.

For most birds in South Africa, the best data we have come from the Southern African Bird Atlas Project (SABAP). Although the atlas only records the species seen, we can get some idea of each species' abundance from the proportion of lists containing each species for a given area. These 'reporting rates' typically are correlated with abundance, although the relationship is also influenced by other factors.



ABOVE, LEFT Common Mynas increased their range dramatically between SABAP1 and SABAP2, but their reporting rate decreased in much of their core range in KwaZulu-Natal. Increases in reporting rates are shown in shades of blue, and decreases in shades of red; yellow grid cells lack sufficient data for a comparison. **MIDDLE** Pied Starlings decreased across their entire range between SABAP1 and SABAP2, and their reporting rate has continued to fall by 20 per cent during SABAP2. **RIGHT** South African Cliff Swallows decreased in some parts of their range between SABAP1 and SABAP2, but increased in others. However, reporting rates have fallen by almost a quarter across their South African range since the start of SABAP2.

What do atlas data tell us about how the numbers of common birds have changed in South Africa over the past few decades? Maps comparing reporting rates from SABAP1 (1987–1992) with SABAP2 (2007–present) show how consistently a species is increasing (blue) or decreasing (red) across South Africa. However, comparisons between SABAP1 and SABAP2 are complicated by changes in the temporal and spatial resolution between the two atlas periods. SABAP1 reported bird occurrence monthly at a quarter-degree grid scale (roughly 28 x 23 kilometres), whereas SABAP2 records birds over at most five days at the 'pentad' scale (roughly 9 x 7 kilometres). The longer time period in SABAP1 increased the chances of recording rare species, but the greater spatial resolution of SABAP2 is even more challenging to interpret. By pooling the SABAP2 data across all nine pentads within each SABAP1 quarter-degree square, species with localised habitats (such as coastal species) are bound to have lower SABAP2 reporting rates.

Another issue results from changes in birding skills from SABAP1 to SABAP2. The increased reporting of several short-tailed cisticolas probably results from the proliferation of birding resources, and especially the availability of recordings of their calls. Comparisons within SABAP2 avoid these difficulties. For most of South Africa, SABAP1 collected data for six years; SABAP2 has been on the go for 16 years. Comparing reporting rates from the period 2007–2015 with the period 2016–2023 gives an idea of how common birds have performed over the past decade or so. Where these trends agree with the comparisons between SABAP1 and SABAP2, the changes have probably been happening for 30 years.

Only a few species show a consistent increase in reporting rates over this period across most of their South African range: the two oxpeckers, Red-billed Quelea, Pearl-breasted Swallow and >

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African Palm Swift. Others have done well in some areas but not in others (such as Pied Crow and Hadeda Ibis). The introduced Common Myna shows one of the most striking comparison maps, having expanded its range enormously from SABAP1 to SABAP2, but with lower reporting rates now in much of its original range in KwaZulu-Natal. Its reporting rates have continued to fall across its range in South Africa within SABAP2, but this might just be a consequence of the 'BirdLasser' effect. Since the widespread adoption of BirdLasser as the primary means of data capture for SABAP2, species lists have become shorter on average (Lee and Nel. 2019. *African Zoology* 55: 155–160), possibly because not all atlasers strive to see as many species as possible in each pentad.

> A host of common waterbirds have also decreased... and even Red-knobbed Coot appears to be decreasing in abundance

Sadly, many more species have shown consistent decreases in reporting rates over the past three decades. We tend to focus on the plight of eagles and vultures, but several common raptors also appear to be in trouble across much of the country, such as Black-winged and Yellow-billed kites, Rock Kestrel and Common Buzzard. A host of common waterbirds have also decreased: Hamerkop, African Spoonbill, Grey and Black-headed herons, and most egrets, with the most marked decrease in Cattle Egrets. Ducks that have decreased include Yellow-billed, African Black, White-backed and Maccoa, as well as Southern Pochard. Both Reed and White-breasted cormorants and Pied and Giant kingfishers continue to decrease, and even Red-knobbed Coot appears to be decreasing in abundance across South Africa.

Among land birds, several common species show worrying signs of consistent decreases: Laughing Dove, Southern Fiscal, Kurrichane and Groundscraper thrushes, Pied and Wattled starlings, Scarlet-chested Sunbird, Crowned, Trumpeter and Southern Yellow-billed hornbills and Purple Roller. A suite of more arid-country species also appear to be in trouble: Karoo and Mountain chats, Pale-winged Starling and Black-headed Canary. Larger ground-dwelling birds that are decreasing include Black-bellied Bustard, Blue Korhaan and Coqui and Grey-winged francolins.

These are just the species that show consistent decreases across both atlas periods in most of their South African ranges. Many more species exhibit local changes in reporting rates. For example, a host of savanna species have expanded their ranges southward and westward, thanks to bush encroachment linked to the increase in atmospheric carbon dioxide. Some appear to have remained unchanged within their core ranges (such as Brown-crowned Tchagra, Green-winged Pytilia, Blue Waxbill and Red-billed and Jameson's firefinches), whereas others might have decreased (White-fronted Bee-eater, Red-breasted Swallow, Sabota Lark, Violet-eared Waxbill and Golden-breasted Bunting). However, bush encroachment impacts negatively on open-country species and probably accounts for the marked decrease in atlas reporting rates for Secretarybirds, including in large protected areas such as Kruger National Park (Hofmeyr et al. 2014. *PLoS One* 9(5): e96772).

Given the challenges of interpreting population changes from atlas data, how much confidence do we have in these trends? Atlas data show falling reporting rates for species that we know from count data to be decreasing, such as Southern Ground-Hornbill, Southern Black Korhaan and most migrant shorebirds. But atlas data are at best a blunt tool for detecting such decreases; the absence of a clear trend in atlas data does not mean a species is secure. Of the Palaearctic-breeding migrants that reach South Africa, eight species have increased in abundance and 14 have decreased across Europe since 1980 (Vickery et al. 2014. *Ibis* 56: 1–22). SABAP data support some of these trends (such as an increase in >

ANTON CRONE

ABOVE The Purple Roller is one of several savanna species that has seen consistent decreases in atlas reporting rates over the past few decades.

OPPOSITE Red-knobbed Coots have adapted to exploit all manner of wetlands, so it's tempting to put the decrease in reporting rates from SABAP1 to SABAP2 down to differences in recording protocols. However, their reporting rate continues to fall even within SABAP2.

CONSERVING MIGRANT LAND BIRDS

In general, migrant birds are not faring well because they are susceptible to threats at their breeding and their wintering areas, as well as along their flyways. Their complex life histories also make it hard to diagnose where the threats are most severe and thus identify where to target conservation action. To date, most attention has been given to migrant waterbirds because their habitats tend to be fairly discrete and thus can be protected – at least in theory – through agreements such as the Ramsar Convention. By comparison, migrant land birds tend to be more dispersed, making it more difficult to implement effective conservation action.

Of the 22 Afro-Palaearctic migrants whose populations have decreased by more than 20 per cent since 1980, 19 are land birds (Vickery et al. 2014. *Ibis* 56: 1–22). A new review suggests that although we have improved our understanding of the biology of these migrants over the past decade, their populations continue to decrease (Vickery et al. 2023. *Ibis* 165: 717–738). Tracking studies have confirmed that most Afro-Palaearctic land bird migrants are widely dispersed at low densities across their wintering areas. As a result, site-specific conservation measures are unlikely to have significant benefits. Instead of focused 'land-sparing' interventions, we need 'land-sharing' approaches to ensure the persistence of these birds. This requires interventions to reverse widespread habitat loss due to 'shifting agriculture' in large areas of Africa. Programmes to promote the planting of favoured trees might help to conserve many migrant land birds. However, for some species hunting still occurs at unsustainably high levels.

It's time to shift from diagnosing declines to testing solutions. If we don't develop cost-effective solutions that slow, or even reverse, the ongoing reductions, we risk losing many of these migrant species. Accurate population monitoring is essential to assess the efficacy of interventions.

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Like most migrant shorebirds, Common Sandpipers appear to be in trouble. Atlas reporting rates have fallen across South Africa since the 1990s, mirroring decreases in population counts across Europe over the same period.

Common Whitethroat and decreases in Common Sandpiper, Barn Swallow, House Martin and Spotted Flycatcher), but contradict the known trends for other species (such as increased reporting rates for Common Cuckoo, Yellow Wagtail and Icterine and Garden warblers, all of which are decreasing across Europe).

This might be because most of our Palaearctic migrants hail from further east, but the pattern is consistent with a 2016 Danish study that found that atlas data detected only half the species in trouble compared to regular counts, and in many cases atlas reporting rates actually increased for species whose numbers were falling (Kamp et al. 2016. *Diversity and Distributions* 22: 1024–1035). This suggests that the many common bird species seemingly in trouble in South Africa based on SABAP data are just the tip of the proverbial iceberg. We need to institute count-based bird surveys to monitor what is happening to our common land birds. ◆

This article stemmed from a review of changes to bird populations in the south-western Cape that appeared in the 75th anniversary issue of the Cape Bird Club's newsletter Promerops *(326: 38–45). I thank Michael Brooks for supplying the SABAP2 data, and many colleagues, notably Alan Lee and Ernst Retief, for helpful discussions.*