Winter
2024
July

FAMILIAR CHAT

"A bird does not sing because it has an answer, it sings because it has a song." — Maya Angelou.

There Are About 10,000 Known Bird Species

There Are Two Main Bird Groups – the 'old' birds… ostriches, emus, kiwis etc and all the others

Birds are the only feathered vertebrates

The closest living relatives of birds are crocodiles

Birds communicate using sound and colour

Most bird species are monogamous

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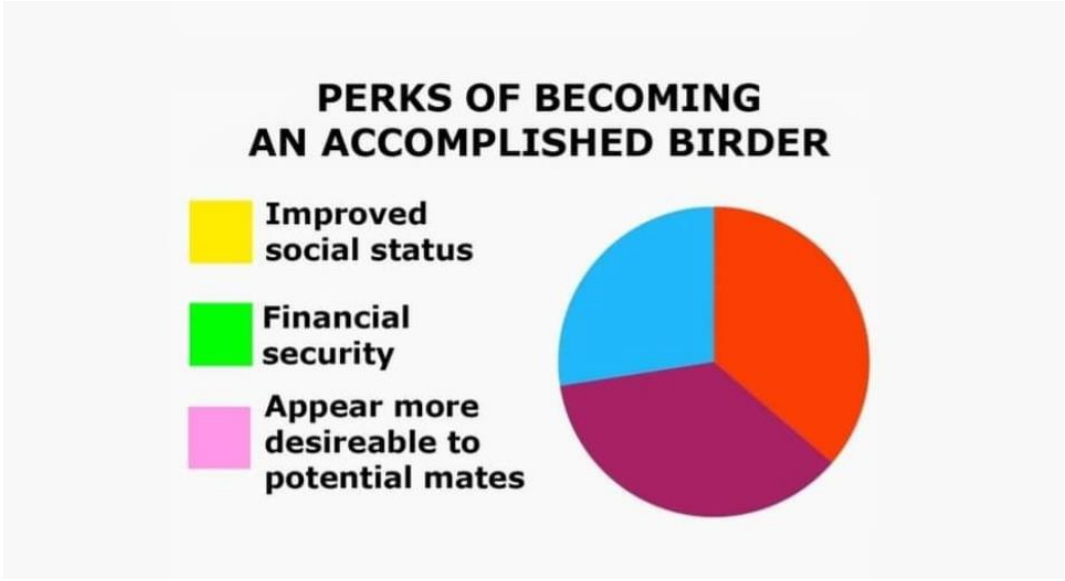


BLB camp at Martin's farm near Molepolole - March 2024 (H Hester)

Fourteen intrepid souls joined the camp at Martin's Farm. They were Craig and Janet, Peter and Virginia, Kabo, Puso and Onalenna, Chris and Declan, Lauri, Amanda and Fitch, their three-year-old son and grandson who stole everyone's hearts, and Harold and Geraldine. It was good to see Declan enjoy himself with a new friend, Fitch. Jhun is the camp manager.

The farm, 27 hectares in extant, is about 30 kms south-west of Molepolole in magnificent bushveld. It took a leisurely two hours to get there through unexpected, beautiful scenery on the other side of Moleps. En route we drove through an impressive gorge between two towering rock faces.

A big attraction not normally encountered on our camps, was a flush toilet and shower. There is a fairly large dam, Maporoka, which is home to a number of interesting species, not least about fourteen Maccoa Ducks. Birding was excellent. A couple of the light sleepers identified a Spotted Eagle Owl calling both mornings before dawn and a Black-crowned Night Heron was also heard. While walking to the dam we saw Meyer's Parrots which hadn't been recorded in this area since 2007, and an Olivetree Warbler. We spent more than two hours at the dam on Saturday morning, until it became too hot, watching birds come and go. Highlights were a Black-breasted Snake-eagle, a Long-tailed Paradise and several Shaft-tailed Whydahs, Violet-eared Waxbills, Larklike and Golden-breasted Buntings, five Little Stints and six Little Bee-eaters. Just after lunch a flock of 250 Abdim's Storks made an impressive fly-past as they soared on thermals en-route to Europe. In the afternoon we returned to the other side of the dam and there was some excitement at having an excellent view of a Greater Honeyguide. Of course, there was the usual selection of ducks, teals, sandpipers, plovers, lapwings and geese. Don't forget the flock of Wattled Starlings. Altogether we recorded about a hundred species.

On Saturday night we thought of Jack Sands and his dire warnings of heat, as a few drops of rain fell. The only one inconvenienced was Peter who sleeps in the open on top of his Cruiser. Talking of Peter, he has assumed the Goldsworthy's mantle of best-equipped camper by far. If one needs Pratley putty to fix a hole in a plastic pipe or food to feed a camp, Peter is your man. Saturday night's dinner was a splendid affair. Our Michelin chef-in-the-making, Kabo, took charge of the kitchen. Together with assistant Jhun, he prepared a Chilli Con Carne dish which can best be described as decadent dining and the tastiest roast pork imaginable among a selection of other meats and salads. Kabo is seriously talented in this field, one who made the most of all the raw food given to him, mostly from Peter. One wonders if a finer meal has ever been prepared on a BLB camp. It was agreed unanimously that this had indeed been an outstanding camp. Comfort, camaraderie, banter and food and drink had been tops. None of us will miss the next camp.

Camp coordinates:

S 24 deg 30.925' E 25 deg 22.149'

Two members of the party received disturbing news from their respective homes during the night, so, as we had probably ticked most of the birds in the area, we decided to break camp and leave earlier than normal. On leaving, Puso with his sharp eyes, saw eight Meyer's Parrots harassing a Gabar Goshawk.

Fortunately, on return, the hearers of bad tidings found that matters had been satisfactorily resolved and all was well that ends well.

A new theory helps explain the epic mystery of bird migration

Birds are way better than people at finding their way. Here's one reason why. By Benji Jones

A Eurasian reed warbler in a marsh in North Norfolk, England. The migratory songbird is an impressive flier, traveling more than 4,000 miles between Europe and Africa each year. The Eurasian reed warbler might look like any other small brown bird, but up in the air it does something extraordinary. It travels more than 4,350 miles (7000km) each year between Europe and Africa, crossing the Sahara Desert and flying as high as 4 miles (6000m), sometimes staying airborne for 30 hours

straight. Even more impressive is its ability to navigate with extreme precision. Year after year, many Eurasian reed warblers, which each weigh half as much as a golf ball, return to the exact same patch of European forest to breed. Scientists sometimes catch them in the very same net they did the year before. And it's not just warblers. Species from city pigeons to cuckoos are able to home in to a precise location, as if it's saved in some kind of internal Google Maps.

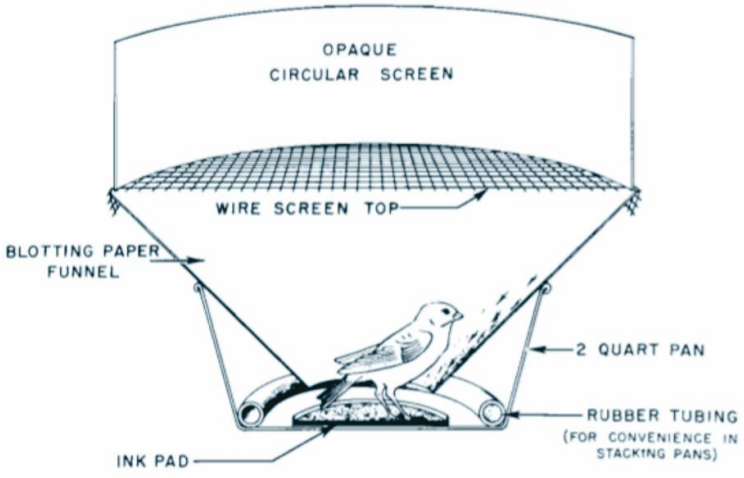
Ornithologists catch birds in large, stationary nets called mist nets. Migratory birds often fly into the exact same nets from one year to the next. Here, a researcher removes a migrating bird from a net in the Czech Republic. Birds navigate in many ways, among them sight, smell, and even the stars. Perhaps most remarkably, they seem endowed with some kind of biological compass that helps them follow Earth's magnetic field — an invisible field produced by the planet's rotation and liquid-metal core. The mysteries of magnetic perception in birds have intrigued scientists for decades. Now we have some fresh clues into this

astonishing ability. A new study in the journal Science suggests that Eurasian reed warblers — and likely other migratory songbirds — sense a specific aspect of Earth's magnetic field, called the angle of inclination, to know where to roost on their journey north. It functions as a kind of magnetic address or "stop sign," the researchers write, that tells the birds when they've arrived.

How do birds sense an invisible field? If you're a bird that migrates to breed, you're better off remembering where you were born. Your birthplace is ideal for raising chicks of your own because you — a bird that survived — were raised there. For the warbler, the challenge is getting there from thousands of miles away.

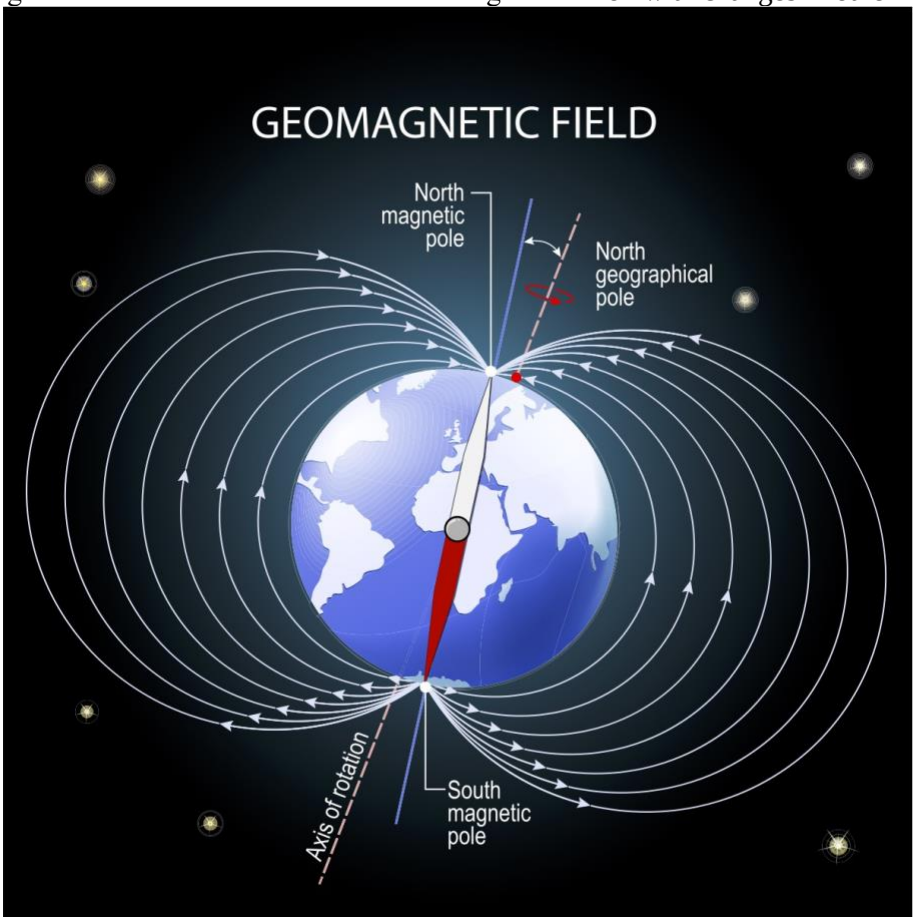
A Eurasian reed warbler feeds chicks in its nest. While humans use compasses and GPS to improve our navigation, birds use built-in hardware. They see in color and can remember landmarks like particular trees or

buildings, said Dmitry Kishkinev, a researcher and expert in animal behavior at Keele University who was not involved in the study. Show a racing pigeon a view of the landscape before releasing it, for example, and it will take a more precise route back to its coop, he said. Birds, especially seabirds that might not have as many visual signposts, can also navigate by scent, Kishkinev added. What's remarkable is that migratory birds also seem to know where they're going even without hints from the environment, said Atticus Pinzon-Rodriguez, a researcher at Lund University who was also not affiliated with the research. Ornithologists figured this out decades ago by putting birds in windowless, funnel-shaped cages with ink on the bottom. When the birds tried to escape, they left behind a trail of ink in the direction of their flight. Sure enough, migratory birds try



to head north in the spring and south in the fall, in line with bird migration in the wild. They're picking up on Earth's magnetic field, Pinzon-Rodriguez said.

A cage called an Emlen funnel that researchers use to figure out the direction of a bird's flight. Some theories of how birds sense this invisible magnetism are truly mind-bending. One theory based on quantum mechanics proposes that subtle changes in Earth's magnetic field can cause a chemical reaction — perhaps involving quantum energy — within light-sensing proteins called cryptochromes in the eyes of birds. Those reactions translate into some kind of visual cue, Kishkinev said, almost like a special pair of glasses that reveals contours of the magnetic field. An older theory is that birds have magnetic material in their beaks that functions as a compass, Kishkinev said — but despite their best efforts, scientists have yet to actually find that mechanism. A third idea, dating back to the 19th century, is that birds perceive the magnetic field through structures in their inner ear, which is what animals use to distinguish up from down and to sense acceleration. Again, these are all just theories, Kishkinev said. But no matter the mechanism, scientists are sure that birds are using Earth's magnetic field to travel. **Magnetic "stop signs"** The mystery deepens when scientists consider that the planet's magnetic field isn't fixed — it moves. In fact, since 1831, the magnetic north pole has shifted more than 600 miles / 1000km. The slight movement of the magnetic poles made the new study possible, said Joe Wynn, the lead author and a researcher at Germany's Institut für Vogelforschung. If birds use the planet's magnetic field to return to their breeding sites, then it stands to reason a shifting field might mean that breeding sites shift, too.



Earth's magnetic field is in flux. To find out, Wynn analyzed nearly 80 years of data on the Eurasian reed warbler that show where individual birds breed each spring. He then compared that information to changes in the magnetic field — specifically, how certain characteristics of the field are shifting, including its strength and inclination. Inclination, or dip angle, is the angle between the magnetic field and the surface of the Earth. Sure enough, he discovered that while birds usually arrive at the same site year after year, sometimes they're slightly off. And when they are, it's typically in the same direction that the inclination angle has moved. That suggests that the Eurasian warblers may be tracking inclination to navigate, Wynn said. (The researchers didn't find a strong correlation with changes in other characteristics of the magnetic field.)The angle of inclination can be thought of as a "stop sign" on a bird's journey north to breed, according to the researchers. They likely start their flight on a fixed course, Wynn said, and then once they sense an angle of inclination that matches what they've sensed before, something inside their brain tells them to land, find a mate, and raise a family. Because the magnetic field moves, it's not the most precise map, Wynn said, but it's detectable around the world and guides migratory birds most of the way, perhaps within feet. Once they're in the vicinity, they likely use other senses — the sight of a familiar pond or favorite tree, for example — to find the right spot.

Humans are messing with Earth's magnetic field

Wynn's research into inclination angles doesn't tell the full story of how birds use the magnetic field to navigate. While the new study uses a massive trove of real-world data, the findings are based on a computer

model and still need to be verified in a controlled experiment, Pinzon-Rodriguez said. Previous research by Kishkinev and others also suggests that birds can essentially pinpoint their location within a magnetic map of the world — which scientists call "true navigation" — even if they're displaced thousands of miles. Whereas inclination only signals when birds should stop, Wynn said, this research implies birds also know where they are in space. But humans may be making it harder for them to find their way, Pinzon-Rodriguez said. While Earth's magnetic field encompasses the entire planet, scientists suspect that humans are scrambling it locally through our electrical equipment, radio towers, and other technologies. European robins were unable to orient themselves in the presence of certain radio waves, for example, in a series of experiments published in 2014 in the journal Nature. "The effects of these weak electromagnetic fields are remarkable: They disrupt the functioning of an entire sensory system in a healthy higher vertebrate," A biologist at the University of Oldenburg who led the study, said in a press release. It's not clear whether the interference is actually harming migratory birds like the Eurasian reed warbler in the wild, given that they use other tools to navigate too. But it shows just how profoundly humans impact the Earth, sometimes in invisible ways.

For the whole article check the link.

https://www.vox.com/down-to-earth/22901324/birds-migration-navigation-earth-magnetic-field

Images from Getty Images.

Five amazing things bird parents do Sim Wood

Did you know that female birds lay eggs because if they didn't, they wouldn't be able to fly? Their aerial mobility comes at the cost of entrusting their little one to an external container. But, no worries, eggs are much tougher than they look! For example, your average chicken egg has a compressive strength of about 100 pounds or 45 kilos.

For female hornbills, parenting really is a 24-hour job. That is because they seal themselves off in the nest to keep the little ones safe. The only opening is a small hole that the male uses to feed her and the chicks.

Some parents just can't be bothered, and that is definitely the case of the pin-tailed whydah. This African bird lays eggs in the nests of finches. Unlike some brood parasites, this one doesn't destroy all other eggs in the nest, but instead sticks around, and the finches have a slightly funny-looking long-tailed sibling.

Crying babies, or chicks, can be a bit of a hassle, but can you imagine if they cried before even being born or, in this case, hatched? That is what poor American white pelican moms have to deal with! Their chicks cry from inside the egg to keep them posted on whether they are too hot or too cold.

Proper nutrition is crucial for a chick to grow up happy and healthy, and that means white-winged choughs have their work cut out for them. These birds live off a diet of beetles that are pretty hard to find. That is why a total of four white-winged chough adults are needed to feed a single little one!

https://blog.mybirdbuddy.com/post/five-amazing-things-bird-parents-do

African savanna raptors show evidence of widespread population collapse and a growing dependence on protected area

Nature Ecology & Evolution **volume 8**, pages45–56 (2024) (The following a *precis*)

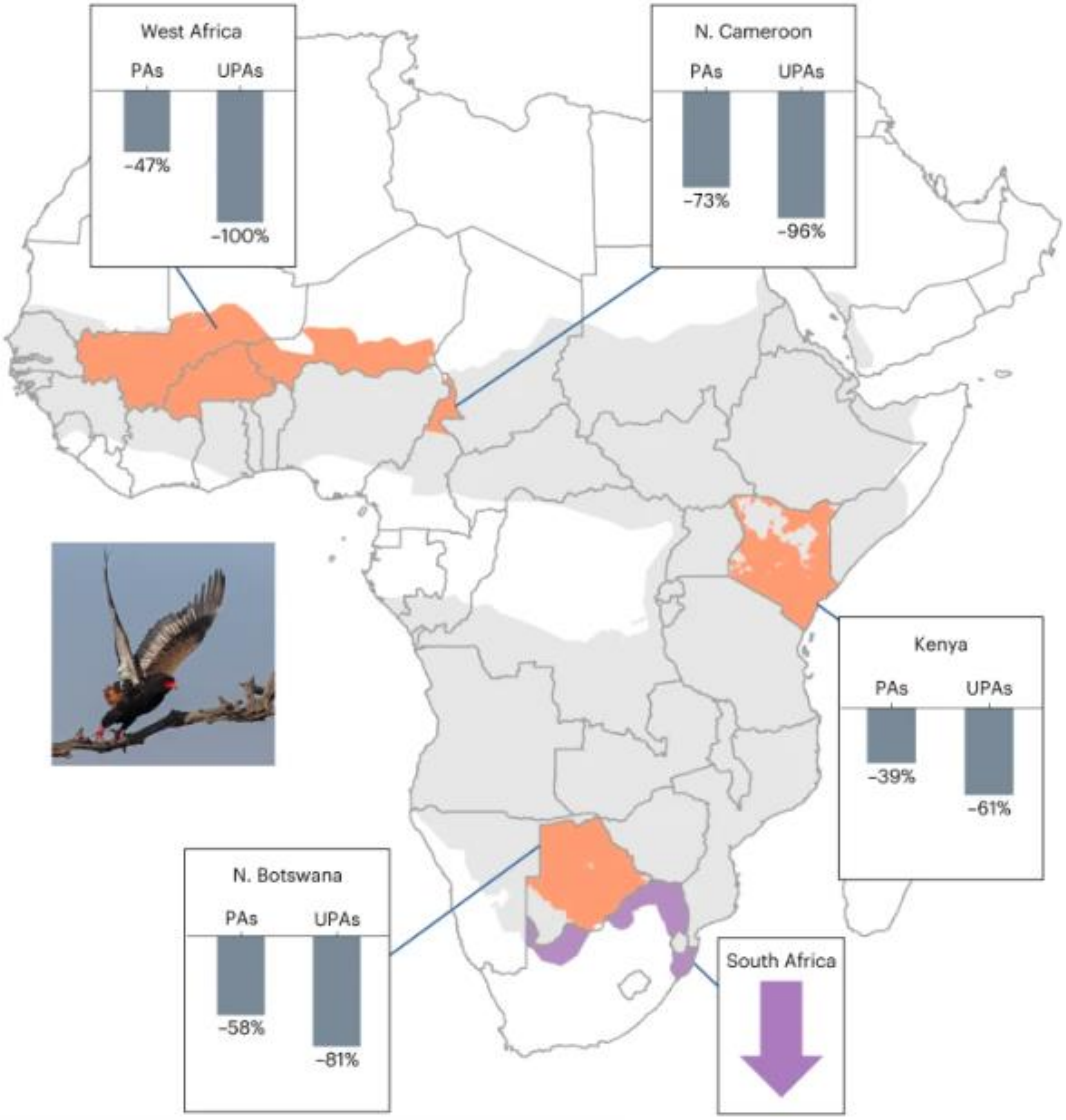
The conversion of wooded habitats to agricultural land is more damaging to biodiversity than any other human activity and poses the greatest extinction risk to birds worldwide. Tropical raptors are especially vulnerable, being particularly slow-breeding and subject to a wide range of threats linked to rapid human population growth, farmland expansion and habitat fragmentation. While resident tropical raptors thus have great potential as a model system for investigating land-use change impacts, trends in their abundance have been little studied, reflecting the paucity of suitable long-term survey data and a limited capacity for conservation research in most developing countries. Here we present a multiregional assessment of trends among many of Africa's widespread, diurnal raptor species, and compare rates of change in their abundance within protected and unprotected areas.

Africa is exceptionally important for global raptor conservation, supporting high numbers of threatened species. Over the past ca. 60 yr, however, the continent's human population has expanded rapidly, driving widespread land conversion and habitat degradation, and creating areas where cumulative human impacts on threatened raptors are especially acute. Sub-Saharan Africa lost almost 5 million ha of forest and non-forest natural vegetation per annum during 1975–2000 alone and now experiences the most severe rate of land degradation in the world. With its human population projected to double by 2058, demands for grazing, arable land and energy are expected to rise substantially. These trends will amplify existing pressures on Africa's protected areas (PAs), which currently account for just 14% of its land and inland waters. Although many PAs are considered to

be failing or deteriorating, well-managed sites form a critical refuge for the continent's declining raptor populations.

Additional threats to Africa's avian apex predators, meso-predators and scavengers include prey-base depletion, persecution (shooting, trapping, poisoning), unintentional poisoning, electrocution/collision with energy infrastructure and killing for food and belief-based uses. These pressures are typically more acute within unprotected land and have probably impacted larger raptor species more severely, reflecting global patterns of extinction risk among terrestrial mammalian predators. Importantly, the loss and depletion of predator populations not only affects the species concerned, but can also trigger extensive cascading effects among their prey populations, disrupting ecosystem functioning. Ecosystem services provided by raptors include the rapid removal of carcasses, potentially limiting the transmission of zoonotic diseases to human populations.

Fig. 1: Trend estimates were derived from four road transect studies and a bird atlas project, located in West, Central, East and southern Africa.



Despite these pressures, and the keystone role played by many raptor species, attempts to measure trends in their abundance have been hindered by the absence of systematic, pan-African bird monitoring programmes, generating robust, long-term trend data for this species group. Here, based on repeated raptor road transect surveys undertaken in four African regions, we examine changes in encounter rates (individuals recorded per 100 km) among 42 species dependent mainly on savanna habitats. To determine rates of change, we combined published and unpublished road transect data from surveys conducted during 1969–1995 and 2000–2020 in West Africa (Burkina Faso, Niger and Mali) Central Africa (northern Cameroon) East Africa (Kenya) and southern Africa (northern Botswana). Pooling data has provided unprecedented insights into trends in the abundance of Africa's savanna raptors, enabling us to identify species whose composite decline estimates exceed the limits defining their current International Union for Conservation of Nature (IUCN) threat status. We

also determine the extent to which decline rates differed between selected PA categories and unprotected land, and investigate potential links between abundance change, body size and protected area dependency.

Road transects were conducted in West Africa, northern Cameroon and Kenya in 1969–1977 and 2000–2020, and in northern Botswana in 1991–1995 and 2015–2016. Here, orange shading indicates parts of the global range of bateleur *Terathopius ecaudatus* that lie within road transect countries and overlap with areas where climatic conditions match those of the routes surveyed in that country. Grey shading indicates the rest of the species' range within surveyed and unsurveyed countries alike. Bar charts show percentage change in the number of individuals encountered per 100 km within protected and unprotected areas (PAs and UPAs), projected over three generation lengths; 44 yr in this instance. The species' trajectory within its South African range (mauve) was derived from SABAP2 reporting rates during 2008–2021.

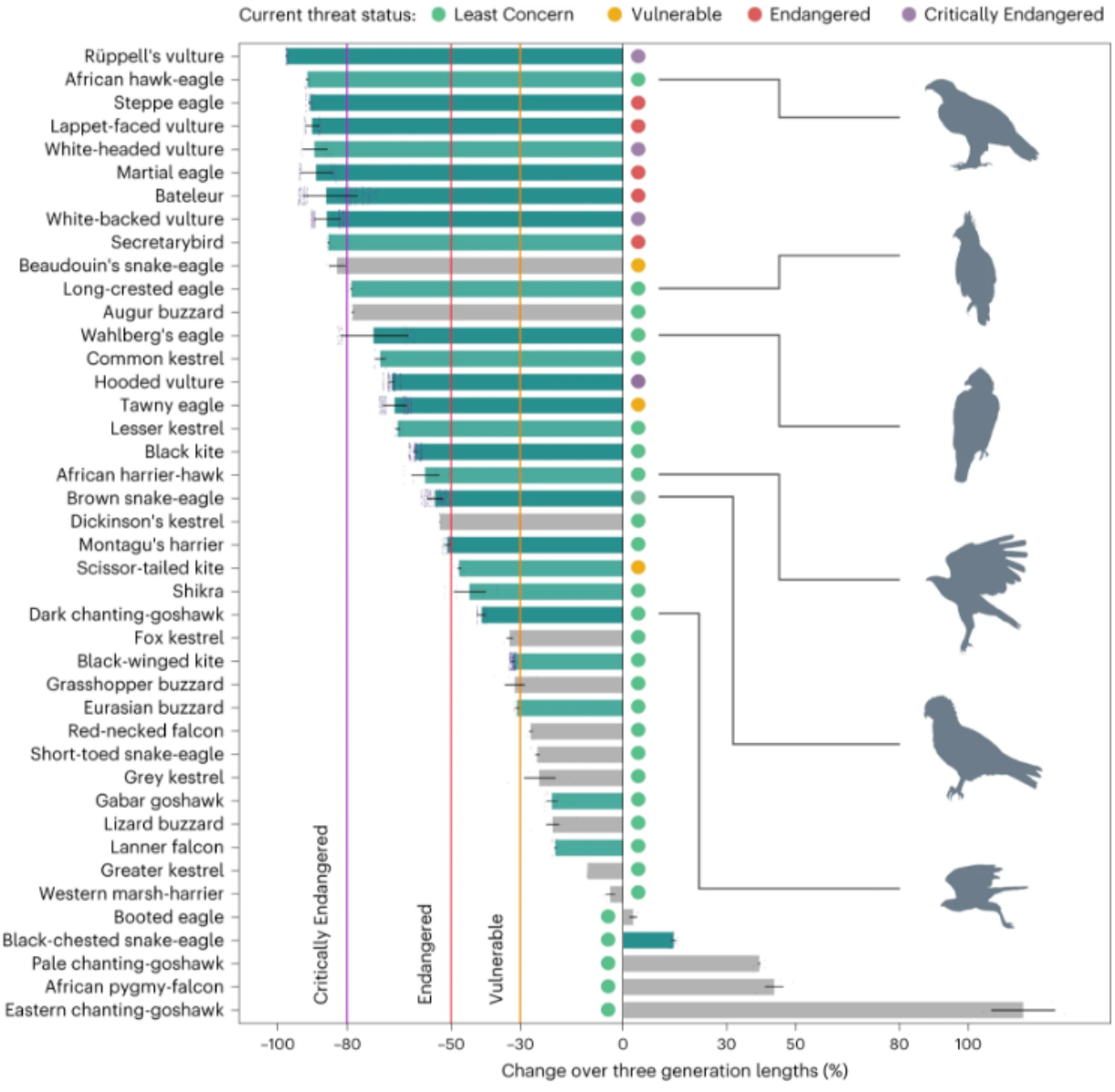


Fig. 2: Percentage change in the number of individuals encountered per 100 km during road transect surveys, projected over three generation lengths

We found strong evidence of widespread declines among African raptor species spanning up to 40 yr (Table 1). Overall, 37 (88%) of the 42 species examined had declined, 29 (69%) by at least 30% over three generation lengths—a criterion used by IUCN to identify species at risk of global extinction44. Of 27 species surveyed in multiple regions, 24 (89%) had exceeded this decline threshold (Fig. 2), 13 of which are currently classified as Least Concern45. While 7 of these 13 species have extensive global ranges outside of

Africa, where trends may differ from those reported here, the remaining 6 are African endemics or near-endemics (Fig. 2).

Fifteen species were surveyed adequately in single regions only (grey bars). The remaining 27 were each surveyed in two regions (lighter green bars) or 3–4 regions (dark green). Bar length shows a given species' median rate of change in abundance, estimated under two scenarios, in which average encounter rates in unsurveyed PAs were assumed to have been the same as in surveyed PAs, or the same as in UPAs. Twenty-nine species had declined at rates exceeding the IUCN Vulnerable threshold; 24 had exceeded the limits defining their current threat category. Fifteen of these are African endemics or near-endemics, 6 of which (illustrated) were surveyed in multiple regions and are currently listed as Least Concern. Silhouettes drawn from photographs: © André Botha.

Discussion

Over periods of ca. 20–40 yr, many of the 42 African raptor species examined had endured a double jeopardy – of precipitous population declines coupled with an increasing reliance on protected areas. While declines on a similar geographic scale have been reported previously for African vultures, this study encompasses a much larger, more ecologically diverse group of savanna predators and scavengers, whose trajectories are more likely to reflect the broad range of pressures now facing African raptor populations.

Our trend analyses leveraged published road transect studies, whose key findings were in broad agreement with those of single-species studies employing more tailored survey methods. They indicate that as a group, Africa's diurnal raptors are facing an extinction crisis, with more than two-thirds of the species examined potentially qualifying as globally threatened. Notably, 13 of those surveyed in multiple regions are currently listed by IUCN as Least Concern. A further 6 species recognized as globally threatened (secretarybird *Sagittarius serpentarius*, lappet-faced vulture *Torgos tracheliotos*, bateleur, tawny eagle *Aquila rapax*, steppe eagle *A. nipalensis* and martial eagle *Polemaetus bellicosus*) had declined more rapidly than the threshold rates used to define their current threat status. Our findings thus highlight the need to reassess their status at the earliest opportunity.

In contrast, our decline rate for hooded vulture (−67% over three generations) was much lower than that estimated in 2016 (−83%) and on which the species' current threat status (Critically Endangered) was initially based. This follows a recent review in which the species' generation length estimate was substantially shortened, reducing the apparent scale of its decline over three generation lengths. Hooded vulture remains Critically Endangered, however, following a surge in demand for vulture body parts in West Africa, its stronghold region. Three additional species showing steep declines are augur buzzard *Buteo augur*, Dickinson's kestrel *Falco dickinsoni* and Beaudouin's snake-eagle *Circaetus beaudouini*. The latter is of particular concern, having declined by 80–85% over three generation lengths within a large (and probably representative) portion of its global breeding range. The plight of these African endemics illustrates the pressing need for research into raptors with restricted breeding ranges.

We show that large African raptors have suffered steeper annual declines than smaller species, mirroring the pattern of extinction risk observed among terrestrial mammalian predators. The risks to large-bodied species are compounded both by their biological traits (for example, low population density, delayed maturity and low annual fecundity and environmental factors (home ranges requiring extensive tracts of scarce, suitable habitat, thereby increasing the species' exposure to human impacts). Furthermore, the loss of large-bodied species has a disproportionate effect on the resilience and functioning of ecosystems, as well as on human-centric values, such as revenue from tourism.

Declines were more pronounced in West Africa

Decline rates reported from West Africa were significantly more pronounced than those recorded elsewhere, consistent with the severity of threats documented in the region, many being substantially worse there than elsewhere in sub-Saharan Africa. Protected areas in West and Central Africa are particularly underfunded and mismanaged and high regional levels of poverty and corruption have been linked to adverse conservation outcomes for charismatic mammal species. Furthermore, the rate of agricultural expansion in West Africa during the 1970s–2000s was more than three times that of Africa as a whole (Anthropogenic pressures). Hence, raptor declines seem likely to have continued in the region since road transect surveys were last conducted in the early 2000s, highlighting the need for repeat surveys. In contrast, SABAP2 reporting rates suggest that proportionately fewer species had declined in South Africa than elsewhere, albeit over a shorter, more recent timeframe (2008–2021).

Migrant species appear to have suffered steeper declines than residents, although this effect was statistically non-significant. Similarly, there was no significant relationship between the direction of change evident among Palaearctic migrants in Africa and in Europe, perhaps reflecting disparities between the populations surveyed, or shifts in the over-wintering distributions of some Palaearctic migrant species.

Decline rates were often high within protected areas

Raptors of all sizes lead an increasingly perilous existence in African savannas, where food supplies and breeding sites have been drastically reduced and persecution by humans is now widespread. While annual declines on unprotected land were thus often substantially higher than within the PAs we assessed, there is now widespread acknowledgement that many African PAs are also losing their ecological integrity thereby depriving threatened species of effective refugia. Indeed, the scale of this deterioration has been assessed in a recent study which showed that over 82% of land encompassed within 516 African conservation areas was considered to be failing or deteriorating. Moreover, vulture and eagle species can range widely across protected area boundaries, exposing them to retaliatory and sentinel poisoning by pastoralists and poachers, respectively and to persecution by livestock farmers. Consequently, levels of attrition were high even within the PA types we assessed, where 40% of species had declined at rates exceeding the IUCN Vulnerable threshold. Clearly, the size, connectivity and/or management of these PAs has failed to safeguard such highly mobile species, reflecting concerns that many African PAs are too small to protect large raptors adequately.

Study limitations

While our sample accounted for 40% of Africa’s 106 diurnal raptor species their trajectories may not be representative of trends among the remaining species, many of which are forest dependent. Globally, tropical forest raptors are at greater risk of extinction than those associated with savannas,perhaps especially so in Africa, where net forest loss during 2010–2020 exceeded that of all other continents. Geographically, North Africa represents a further, notable gap in our coverage. Here, many of the same threats prevail as elsewhere in Africa, and the limited evidence availabls suggests that raptor population trends in the region may be similar to those south of the Sahara.

Shrub encroachment within savanna habitats since the 1980s could have adversely affected raptor detectability, potentially contributing to the disparities observed between early and recent encounter rates. Since vegetation structure in the vicinity of survey transects was not assessed, we were unable to test whether changes in woody cover had occurred along the routes surveyed. Although widespread changes in shrub encroachment have been reported their effects are likely to have been small in comparison with many of the declines reported here. Moreover, although shrub encroachment would seem less likely to impede the detection of large soaring raptors, these species had shown some of the steepest declines.

Mitigating raptor declines

While ongoing efforts to protect Africa's charismatic megafauna, including elephants *Loxodonta* spp. and lions *Panthera leo* help safeguard critical raptor habitats, raptors have distinct management requirements differing from those of large mammals. These include the protection of nesting trees and cliffs, the global adoption of bio-pesticides for locust control more effective management of *Quelea* control operations, and an improved understanding of the corridors and habitats required by migrant raptors. Mitigation is urgently required to end the extensive mortality caused by powerlines and windfarms particularly along migratory flyways. Innovation is needed to reduce mortalities caused by lethal pole and turbine designs, and better enforcement of regulations is required to prevent energy infrastructure from being built within protected and sensitive areas.

The future of Africa's raptors also rests on (1) effective legislation for species protection, (2) enhanced management of PAs, particularly in relation to tree loss, disturbance at nest sites, poaching and poisoning, (3) tighter coordination between government and conservation stakeholders and (4) both improved law enforcement and innovative economic incentives to counter persecution, sentinel poisoning and the harvesting of raptors for food and belief-based use. Better coordination is also required between range states encompassing migratory routes facilitated by frameworks such as the Convention on Migratory Species (CMS) Memorandum of Understanding (MOU) on the conservation of birds of prey in Africa and Eurasia.

To address the need for long-term raptor monitoring and expanded research and conservation programmes, we have developed the African Raptor Leadership Grant, which supports educational and mentoring opportunities, boosting local conservation initiatives and knowledge of raptors across the continent. Furthermore, we recommend increased stakeholder engagement in raptor conservation to develop regional raptor Red Lists, monitoring schemes and species action plans, with guidance from the CMS Raptor MOU Technical Advisory Group and relevant IUCN Species Specialist Groups.

The evidence we present here of a significant shift in the reliance of African raptor species on protected areas substantiates recent calls to expand the global protected area network and demonstrates the importance of proposals agreed at the Convention on Biological Diversity COP15 in 2022: to effectively conserve and manage at least 30% of the world's surface by 2030. Furthermore, our results underscore the need to substantially improve PA management throughout Africa, to meet the 'green list standard' set by the IUCN World Commission on Protected Areas. In this regard, a recent African-driven initiative—APACT—may prove pivotal in leveraging the finances needed to effectively manage new and existing conserved areas.

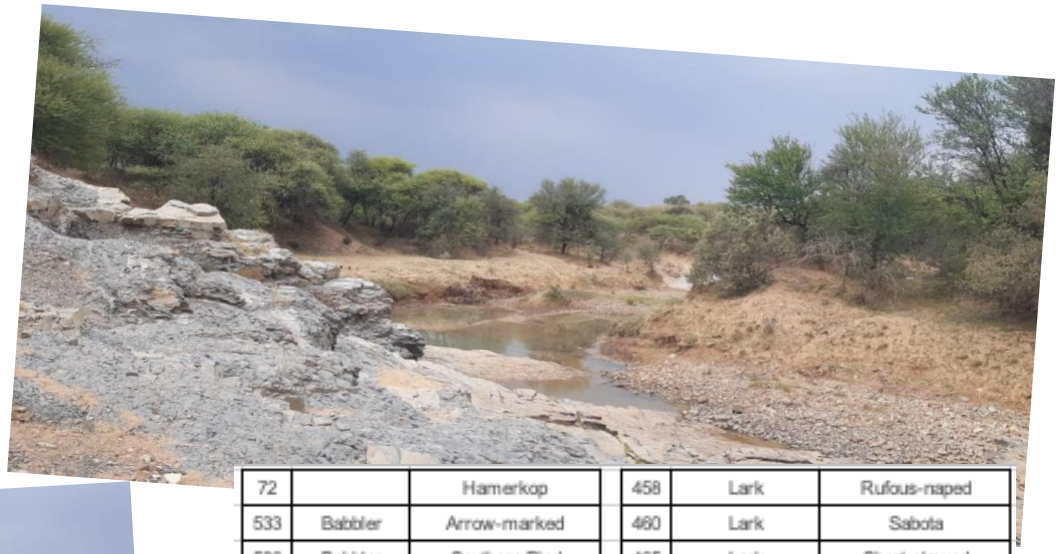
While raptors also extensively utilize unprotected areas, particularly during migration and seasonal stays, human population projections for sub-Saharan Africa point to further, widespread conversion and degradation of natural habitats, particularly on unprotected land. Well-established links between land conversion and biodiversity loss together with the patterns of decline documented here, give cause to doubt whether large raptors will persist over much of Africa's unprotected land in the latter half of this century. Broad-scale interventions and collaborations are thus urgently required to address the multitude of threats facing raptors in unprotected areas, thereby also helping to protect other wildlife species. Furthermore, there is a pressing need to substantially improve the connectivity, management and coverage of PAs in Africa, in line with global aspirations, a transition considered fundamental to safeguarding biodiversity, ecosystem functioning and climate resilience.

The full article can be found at https://www.nature.com/articles/s41559-023-02236-0#Fig2

JUNE MONTHLY WALK ALONG THE TAUNG RIVER

55 species were spotted on this walk. Not bad for a winter walk!

Ref. Pentad 2430_2520

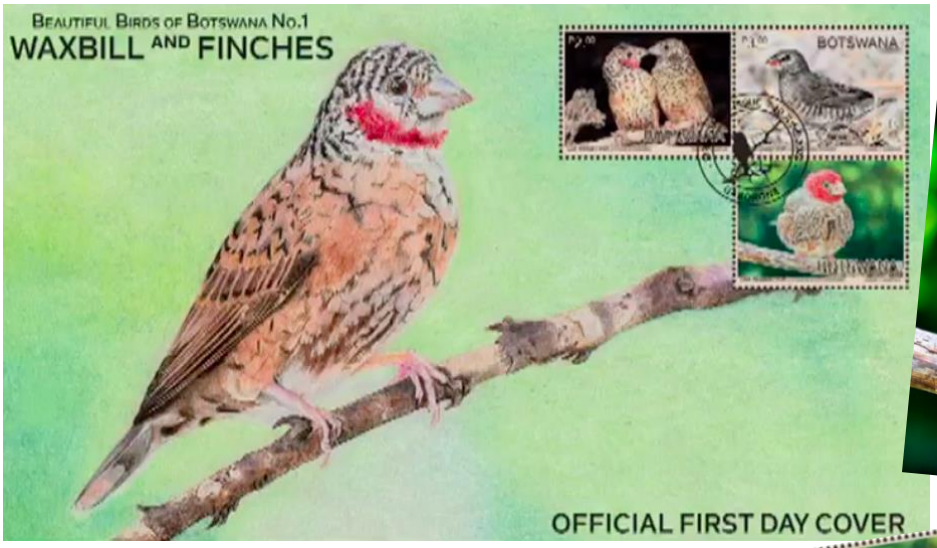


Photos courtesy Virginia Parker

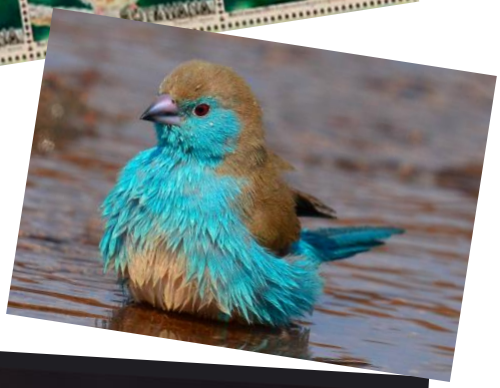
Of particular interest may be the Short-clawed Lark, the Green-winged Pytillia, Fairy Flycatcher, two types of Eremomela and the Yellow Canary

72		Hamerkop	458	Lark	Rufous-naped
533	Babbler	Arrow-marked	460	Lark	Sabota
536	Babbler	Southern Pied	465	Lark	Short-clawed
432	Barbet	Acacia Pied	391	Mousebird	White-backed
439	Barbet	Crested	734	Myna	Common
673	Batis	Chinspot	521	Oriole	Black-headed
410	Bee-eater	Little	748	Oxpecker	Red-billed
544	Bulbul	African Red-eyed	311	Pigeon	Speckled
860	Canary	Black-throated	692	Pipit	African
866	Canary	Yellow	650	Prinia	Black-chested
642	Cisticola	Rattling	830	Pytilia	Green-winged
621	Crombec	Long-billed	421	Scimitarbill	Common
522	Crow	Pied	586	Scrub Robin	Kalahari
316	Dove	Cape Turtle	588	Scrub Robin	White-browed
317	Dove	Laughing	711	Shrike	Crimson-breasted
318	Dove	Namaqua	724	Shrike	Magpie
314	Dove	Red-eyed	786	Sparrow	Cape
517	Drongo	Fork-tailed	785	Sparrow	Great
601	Eremomela	Burnt-necked	784	Sparrow	House
600	Eremomela	Yellow-bellied	4142	Sparrow	Southern Grey-headed
114	Falcon	Lanner	780	Sparrow-Weaver	White-browed
707	Fiscal	Southern	185	Spurfowl	Swainson's
678	Flycatcher	Fairy	737	Starling	Cape
665	Flycatcher	Fiscal	745	Starling	Red-winged
661	Flycatcher	Marico	735	Starling	Wattled
174	Francolin	Crested	755	Sunbird	Marico
339	Go-away-bird	Grey	763	Sunbird	White-bellied
88	Goose	Spur-winged	387	Swift	African Palm
55	Heron	Black-headed	714	Tchagra	Brown-crowned
4129	Hornbill	Southern Red-billed	557	Thrush	Groundscraper
426	Hornbill	Southern Yellow-billed	658	Warbler	Chestnut-vented
81	Ibis	African Sacred	839	Waxbill	Blue
84	Ibis	Hadada	779	Weaver	Red-billed Buffalo
242	Lapwing	Crowned	789	Weaver	Scaly-feathered
			803	Weaver	Southern Masked

JUNE 2024 Botswana Post release a theme on Waxbills and Finches:



Clearly Ian White, our BLB Chair, has much to be thanked for in terms of the content for this edition from Botswana post. The photos are his, from which the pictures on the stamps were derived.



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Photos courtesy Ian White, Flickr

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GABORONE GAME RESERVE

This reserve was established in 1988 by the Kalahari Conservation Society to give the Gaborone public an opportunity to view Botswana's wildlife in a natural and accessible location. It seems to be working: although the reserve is only 5 sq km, it's the third busiest in the country and boasts wildebeest, elands, gemsboks, kudus, ostriches and warthogs. The birdlife, which includes kingfishers and hornbills, is particularly plentiful and easy to spot from observation areas.

The reserve also has a few picnic sites, a game hide and a small visitor-education centre. All roads in the reserve are accessible by 2WD; guided drives are not offered. The reserve is about 1km east of Broadhurst Mall and can be accessed from Limpopo Dr.