

FAMILIAR CHAT



Welcome to the Autumn 2018 edition of our newsletter



Monthly walks

We organize a monthly walk, which takes place on the first Sunday of every month. We meet at Molapo Crossing in Gaborone at 6.30am in the summer and 8.30am in the winter. We will send you a reminder the week before with some details about where we are going. Beginners most welcome.

Don't forget to visit the BLB shop

Our BirdLife shop is in Gaborone in the Kgale Spar complex, next to Game City complex. It's in the back of the Craft shop. Lots of interesting things to buy in there for the kitchen, garden, and lots of interesting books too.

Have you visited our Facebook BirdLife page recently? When was the last time you posted something there? When you see anything related to birds, share it with us all please!

Allow me to thank Doreen McColaugh for her consistent support in editing each edition of FC before they go 'out'. However, the final responsibility for any mistakes must entirely be placed on the shoulders of the Editor. Thank-you Doreen!

(Image source unknown)



1 day old plover
(Image source unknown)



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BPM

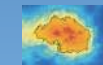
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Rapid morphological change of a top predator with the invasion of a novel prey

Invasive exotic species are spreading rapidly throughout the planet. These species can have widespread impacts on biodiversity, yet the ability for native species, particularly long-lived vertebrates, to respond rapidly to invasions remains mostly unknown. The good news is that there is evidence of rapid morphological change in some species that are being studied. The endangered snail kite (*Rostrhamus sociabilis*) which occurs across North America has successfully undergone genetic modifications over a period of a decade to adapt itself to an invasive snail, the island apple snail (*Pomacea maculata*), a much larger congener of the kite's native prey. Studies have shown that the kite bill size and body mass increased substantially over this period. Larger bills should be better suited to extracting meat from the larger snail shells, and it appears that there is strong selection on increased size through juvenile survival.

Christopher E. Cattau et al, *Ecology & Evolution* volume 2, pages108–115 (2018)
doi:10.1038/s41559-017-0378-1



Spare a thought for the millions of birds that annually migrate across the Mediterranean sea to and from Africa that have to avoid being slaughtered by thousands of Maltese who, most often illegally trap birds. Check out BirdLife Malta's Facebook site to find out what they are doing to try and stop the possibly 6000 trapping sites across this tiny island. Unfortunately a court case recently concluded has not brought any fruitful results in terms of making available to the public information about the whereabouts of trapping sites. The situation is very sad. One would have thought this barbaric practice should have been stopped decades ago, but the Government of Malta continue to turn a blind eye and BirdLife Malta members put themselves at risk by continuing to bring this to the attention of the world.

- USEFUL LINKS [All you need to know about trapping in Malta](#)
- [#STOPTRAPPINGNOW campaign launched by BirdLife Malta](#)
- [Court case C-557/15 at the European Court of Justice \(ECJ\)](#)
- [The ECJ Advocate General's Opinion in the ECJ case against Malta](#)

Bird-ringing - 'Citizen Science'

Photo credit: Kelly Landen



nets. Ditto in the evenings when work is finished with the aid of a torch. Setting up the 'office' in the bush is all part of the process, often off the back of the car. In order to ring one has to get permission from the Ministry of Environment, Wildlife and Tourism, and have a CTU licence.

When the cards are turned and the captive becomes the captor! Ringing birds can have its 'ouch' moments, but the serious side of it involves collating data on bird species that in the long run can be used to see temporal and spatial variation within species. All such data is collected centrally at Cape Town University (CTU) Animal Demographic Unit (ADU) - and it is accessible to anyone who wishes to study such data. However it's not for the faint hearted. The best time to catch birds is in the half-light when their sight is challenged to escape the mist nets that are used to capture them. Therefore early rise means 1 hour before sunrise to set up the

Crested Barbet	<i>Trachyphonus viallantii</i>
Red-eyed Dove	<i>Streptopelia semitorquata</i>
African Black Duck	<i>Anas sparsa</i>
Little Egret	<i>Egretta garzetta</i>
Burnt-necked Eremomela	<i>Eremomela usticollis</i>
Fiscal Flycatcher	<i>Sigelus silens</i>
African Harrier-Hawk	<i>Polyboroides typus</i>
Sabota Lark	<i>Calendulauda sabota</i>
Black-chested Prinia	<i>Prinia flavicans</i>
Black-backed Puffback	<i>Dryoscopus cubla</i>
Long-tailed Paradise-Whydah	<i>Vidua paradisaea</i>
African Red-eyed Bulbul	<i>Pycnonotus nigricans</i>
Reed Cormorant	<i>Phalacrocorax africanus</i>
Cape Turtle-Dove	<i>Streptopelia capicola</i>
Laughing Dove	<i>Streptopelia senegalensis</i>
Namaqua Dove	<i>Oena capensis</i>
Grey Go-away-bird	<i>Corythaixoides concolor</i>
Cape Glossy Starling	<i>Lamprotornis nitens</i>
Chestnut-vented Tit-babbler	<i>Sylvia subcaeruleum</i>
Red-faced Mousebird	<i>Urocolius indicus</i>
Little Bee-eater	<i>Merops pusillus</i>
Blacksmith Lapwing	<i>Vanellus armatus</i>
Crowned Lapwing	<i>Vanellus coronatus</i>
White-browed Sparrow-Weaver	<i>Plocepasser mahali</i>
Whiskered Tern	<i>Chlidonias hybrida</i>
Red-billed Oxpecker	<i>Buphagus erythrorhynchus</i>
Egyptian Goose	<i>Alopochen aegyptiaca</i>

A lovely variety of water and terrestrial birds were seen. Perhaps the highlight was the sighting of an African Black Duck, a 'B' rarity in Botswana.

All maps courtesy Google Maps

BIRDWALK – SUNDAY 6TH MAY 2018

Gaborone Dam Wetlands
6/5/2018 S24.42.905°



Why are big, insect-eating birds disappearing? Maybe we're running low on bugs.

No guild of North American birds is declining so rapidly as aerial insectivores: acrobatic marvels whose maneuvers make our hearts soar, and who provide a vital ecosystem service. Why are their numbers plummeting? A leading explanation is a widespread decline in insect populations — a troubling possibility, hinted at by many studies but also one difficult to pin down. There are few records of historical insect numbers against which to compare our own.

In a study published in the journal *Frontiers in Ecology and Evolution*, researchers led by biologist Philina English of Simon Fraser University describe their ingenious workaround: they used museum specimens of whip-poor-wills, a medium-sized insect-eater whose populations are falling by 3.5 percent each year, as biological time machines. By contrasting the chemical composition of their bodies with the composition of living whip-poor-wills, the researchers could extrapolate how the birds used to eat.

“These results are consistent with the hypothesis that aerial insectivore populations are declining due to changes in abundance of higher trophic-level prey,” wrote the researchers. To translate that into normal speak: the birds are suffering because there seems to be a lot fewer big bugs than there used to be. If insect populations are indeed falling, surmised the researchers, it stands to reason that bugs higher up the food chain, who consume insects smaller than themselves, would be declining even faster. This would push whip-poor-wills, who prefer to eat larger, more nutrient-rich insects, to eat smaller and less-sustaining fare.

As it happens, smaller bugs and their insect predators accumulate subtly different forms of nitrogen in their tissues. The presence of these nitrogen signatures in bird bodies thus becomes a record of their own diet. When English and colleagues compared the chemistry of claw and feather samples from whip-poor-wills caught recently in Ontario to specimens collected for Ontario museums during the late 19th and 20th centuries, they found a “significant decline” in chemical traces of larger insects.

The pattern “is consistent with contemporary whip-poor-will populations feeding lower in the food web than in the past,” wrote the researchers. While English cautioned that more testing is necessary to be absolutely certain that something else wasn't responsible for the chemical shift, the findings fit with other observations of insect decline.

Continued on page 7

Bird watching can be a great way to relax and set your mind ready for a productive day ahead. On the 15th of March 2018, Birdlife Botswana staff members went out birdwatching behind Diremogolo Hill, Gabane. It was a good activity where BLB staff members were led by Chris Brewster, the Chairperson of the BLB Rarities committee (and undoubtedly Botswana’s current most experienced and skilled bird-watcher). 22 bird species were identified.

**BLB STAFF
BIRD-WATCHING
OUTING**

1. Green-winged pytilia
2. Red backed shrike
3. Spotted flycatcher
4. Red headed finch
5. Sparrow weaver
6. Southern masked weaver
7. Mocking cliff chat
8. Black collared barbet
9. European bee eater
10. Black chested prinia
11. African red-eyed bulbul
12. Familiar chat
13. Black throated canary
14. Blue waxbill
15. Cape glossy starling
16. Pied barbet
17. Marico sunbird
18. Grey billed hornbill
19. Southern grey headed sparrow
20. Cape turtle dove
21. Arrow marked babbler
22. Indian/ village mynah

By Tsogo Bethel

Which of these birds is this a photograph of?
Photo credit: <http://www.pbase.com/paulvangiersbergen>



BOTSWANA'S "COMMON BIRDS" ARE DOING WELL..... SO FAR....

BirdLife Botswana attended the 5th African International Conference on Statistics at the University of Botswana Conference Centre during March 19-22, 2018. The conference, the first ever in Botswana, was jointly organized by the Department of Statistics at the University of Botswana and by the Department of Mathematics/Statistics at the University of Maryland, Baltimore County (UMBC). The central theme of the conference was *Solutions for a Complex World: New Generation Statistics*. The conference had a total of 90 participants from all parts of the world.

BirdLife Botswana presented a paper at the conference titled "Developing Indicators for African Birds" authored by international collaborators and a team from BirdLife Botswana, using the information collected by volunteers from Botswana, Uganda and Kenya. The key results were that the encounter rate of common and widespread birds in Botswana has increased by 65% during 2010-2015 and only two species showing a significant decline. In Uganda, the overall trend between 2009 and 2015 was stable, but showing a small recent decline, and 21 species showing a significant decline. This suggests tentatively that common bird populations are faring better in Botswana than Uganda. In Botswana, the most frequently recorded species was the Cape Turtle-Dove, *Leeba* (present in 84% of transect counts). The most abundant species was the Red-billed Quelea *Thaga* (an overall count of at least 40,250 from 483 records during 2010-2015).

Other interesting results were that birds in Botswana seem to be doing well outside protected areas as compared to birds in Uganda. In Botswana the indicators suggested that common bird populations were faring better outside protected areas. In Uganda, the opposite was true as might be expected in protected areas. In time, these indices (numbers) will be useful in assessing the performance of protected areas in each country, at least in relation to common bird populations and as part of a wider assessment.

Recommendations were that BirdLife Botswana needs to forge a partnership with educational institutions to facilitate data use from this common bird monitoring programme. It is also crucial for Botswana to secure a reliable source of in-country funding for the long-term operation and success of the programme. With longer-term datasets, it will be possible to examine bird populations in relation to other environmental factors, including land-use pressures, climate change and protected area management regimes. The indicator data will feed multilateral environmental agreements like the Aichi Biodiversity Targets 5: (*By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced*), 7: (*By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity*), and 15: (*By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained*), and Sustainable Development Goal 15 (*Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss*).

A huge thank you to volunteer surveyors who contributed to data collection. Sincere gratitude to the financial supporters of the BPM scheme, notably the Royal Society for the Protection of Birds, the Global Environment Facility/Small Grants Programme (BOT/SGP/OP4/CORE/09/12), Global Environment Facility/United Nations Development Programme (project PIMS no. 5359), Debswana Orapa Letlhakane Damtshaa Mines (Contract no. 395-ORA-C005587), and DWNP.

For the data to be more robust BirdLife Botswana calls Botswana to volunteer to monitor birds every February and November. To know about bird counting please contact 3190540 or email education@birdlifebotswana.org.bw.

By Keddy Moleofhi - BLB Staff

In the last in our series highlighting the variety and importance of the vultures that are found in Botswana, we give thanks to the time and energy Doreen McColaugh has put into making these most informative articles.

PALM-NUT VULTURE

In addition to the five resident species of vultures that reside and breed in Botswana, the two vagrants or occasional vulture visitors, the Egyptian Vulture and the Palm-nut Vulture, are also described in this series. As they are vagrants and do not reside and breed here, those details are not included.

Vultures are classified under Birds of Prey although they do very little preying on live animals as their main sources of food are carrion (the remains of dead animals) and human waste found in rubbish dumps and in the environment. Some, but not all, vultures will at times catch small prey such as rodents and other small animals. The Palm-nut Vulture is an interesting bird as it is principally a vegetarian vulture, specializing in the fruit of oil palms and to a lesser extent the *Raphia* palm. Sometimes it is called "a "bird of prey" that's not", but when away from forested areas and the oil palms it depends on, it does occasionally take small-sized prey animals such as birds, mammals, reptiles, frogs, crabs, fish and larger insects. When fishing it still-hunts from a perch (Mundy, et al. p 229).

The Palm-nut Vulture has its own genus and is the only species in it. *Gypohierax*, the genus, is from Greek where *gypo* refers to *gups* (vulture) while *hierax* is (hawk). The species *angolensis* from Latin refers to Angola, from where it was first described (Mundy, et al. p 222). Some still think it might be more a hawk or eagle – as per its



genus description – but here it is considered a vulture, however different it might be to other vultures.

This vulture is noticeably smaller than the Egyptian Vulture, weighing on average a little less than 1.5 kg, making it the smallest of all African vultures. When adult, its plumage is all white with the exception of the black areas on its wings. Its head is almost completely

feathered with soft white feathers, which also tells us that this vegetarian vulture is not one that is feeding by sticking its head into rotting carcasses and jostling with other vultures over food. On the face there is only a little bare red skin around the eyes and a narrow red strip of skin along the jaw line. The eye is yellow and the long, sloping bill with a strong hook at the end is a yellowish brown colour. The Palm-nut Vulture has a sloping forehead and this combined with the large, sloping bill gives it a strong, distinctive profile. The feet are also a yellowish brown with strong, long talons/claws. The strong beak and strong talons are necessary to hold the palm nut down and be able to tear off the hard husk so as to get at the fruit inside. Sometimes the fruit is swallowed whole and later the indigestible nut is enclosed in a pellet and regurgitated. (Mundy, et al. p 228).

Photo copyright Peter Beesley



Juveniles have an all brown plumage and so may be confused with the similarly coloured Egyptian Vulture juvenile. The facial skin on Palm-nut Vulture juveniles is brown as are the eyes and the feet. As it gets older its plumage will become a blotchy mixture of brown and white, but will take four years before an immature gets its full adult plumage and other adult characteristics.

Being smaller, this vulture does not have to wait for thermals to develop. Although not dependent on thermals, they will use them from time to time. Their flight is said to be slow and laboured but yet eagle-like and powerful. While the Egyptian Vulture is highly migratory the Palm-nut Vulture is a sedentary species that as an adult stays in its area year round, not moving too far from its main source of palm nuts and other fruit and seeds. Immatures, however, move around more until they settle down. The vagrants that occasionally appear in Botswana probably come from breeding areas in Namibia or the Kwa Zulu Natal area in South Africa, or perhaps from near-by sub-Saharan countries where it also breeds. The Palm-nut Vulture is sometimes found near human habitation and is said to be tame and inquisitive.

While most African vultures are listed as Critically Endangered, the Palm-nut Vulture is the exception. It is classified as of Least Concern. Although it suffers from habitat loss and loss of its major food source when commercial palm nut plantations, planted to a different species of palm nut, are developed by cutting down natural forests that this vulture needs, its numbers remain strong. Because it is sedentary and principally vegetarian, it is not exposed to the poisons that carrion-eating vultures are, as well as to the dangers of flying into electricity pylons and wind machines that kill so many others.



Photo credit,

Charles J Sharp

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BIRDLIFE BOTSWANA AT SCHOOLS



where

students defined a favorable environment for birds, a second session where a litter picking activity was carried out to create awareness about the importance of a clean school environment, and a final session where students discussed the three Rs of environmental conservation. **REUSE, RECYCLE AND REDUCE**. The little understood activity of **Composting** was also discussed.

As has always been a norm at Birdlife Botswana to get involved with schools through Environmental education clubs, on the 15th of March 2018, BirdLife Botswana's volunteer Ms Boitumelo Moopedi a PDG student at University of Botswana attended Botlhale International English Medium School Environmental Club where she had two sessions with a group of 23 BirdLife EE club members. She split her visit into three sessions: A classroom activity





BIRDLIFE BOTSWANA ENVIRONMENTAL EDUCATION... continued...

On the 5th April I went to Botlhale Private school to resource the BLB Environment club there. I started by asking the students to identify their favorite animals, be it birds, mammals, reptiles, even insects. The pupils told their friends their favorite animals. The second step was to draw those particular animals and finally indicate why they prefer the animal more than any other. Animals which were identified included, lions, different kinds of birds, as well as domestic animals such as dogs and chickens. Their reason for choosing their animals showed that they understand the value of animals. We then took each picture drawn and pasted on a manila as Botlhale BirdLife club portrait.

Continued from page 3.....

By Boitumelo Moopedi BLB EE Volunteer



An important next question is where the decline is happening: on southern wintering grounds, northern breeding grounds, or along migration routes? English noted the importance of the Gulf Coast, a crucial migratory stopover region. If insects are in short supply there, at a time when migrants need all the fuel they can get, it would be especially harmful.

In addition to where, another question is: why are insects in decline? Climate change and habitat loss are possible culprits. Collisions with automobiles are also an underappreciated problem, says English. And hovering

over it all is the issue of pesticide pollution, and in particular neonicotinoids, the world's most widely-used class of pesticides. Initially thought to be environmentally benign, they've been described accumulating in soil and water, where they're toxic to insects and linked to insect-eating bird declines. The implications of this are not restricted to whip-poor-wills. They are, wrote the researchers, a "case study." The same may well be happening in other members of their guild, such as nighthawks and swifts and swallows. An entire way of being — and one that humans rely upon to control insects we consider pests — is threatened.

"Aside from admiring the beauty and grace of birds like swifts and swallows," says English, "I genuinely fear a world where we are compelled to rely on controlling agricultural and disease-carrying pest insects exclusively through the use of chemicals and technology because too many of their natural predators have been effectively eliminated." If people wait too long, the only aerial insectivores left might be in museums.

[Photo credit: Courtesy of Ian White – Flickr]

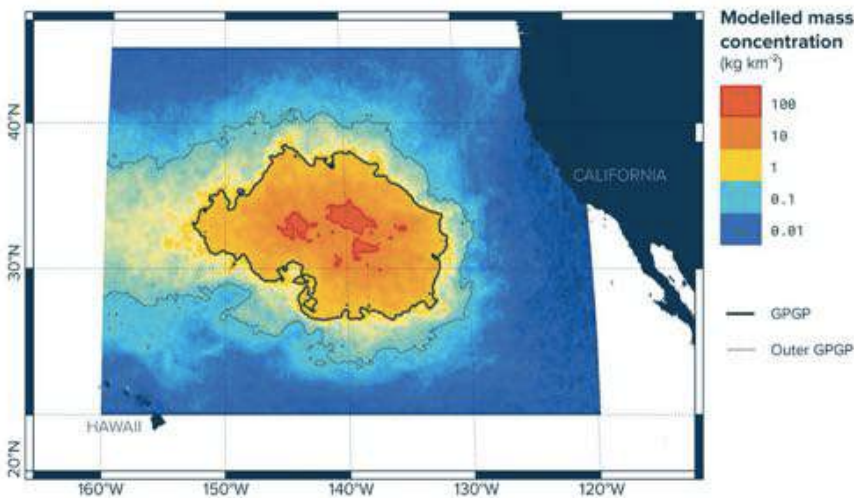
THE PACIFIC GARBAGE PATCH – Another environmental nightmare little talked of..

Seventy-nine thousand tons of plastic debris, in the form of 1.8 trillion pieces, now occupy an area three times the size of France in the Pacific Ocean between California and Hawaii, a scientific team reported last month (April 2018).

The amount of plastic found in this area, known as the Great Pacific Garbage Patch, is “increasing exponentially”, according to the surveyors, who used two planes and 18 boats to assess the ocean pollution. “We wanted to have a clear, precise picture of what the patch looked like,” said Laurent Lebreton, the lead oceanographer for the Ocean Cleanup Foundation and the lead author of the study.

The Garbage Patch has been described before. But this new survey estimates that the mass of plastic contained there is four to 16 times larger than previously supposed, and it is continuing to accumulate because of ocean currents and careless humans both onshore and offshore. The “patch” is not an island or a single mass, leading some scientists to object to the name. Instead, it’s a large area with high volumes of plastics, one in which concentrations increase markedly as you move toward its center. The debris ranges from tiny flecks to enormous discarded fishing nets, which make up 46 percent of the material, the study found.

The study was led by the Ocean Cleanup Foundation and researchers at institutions in New Zealand, the United States, Britain, France, Germany and Denmark, who published the findings in the journal *Scientific Reports*. The Ocean Cleanup Foundation released this image showing the size of the patch and also where the plastic becomes most dense. (Ocean Cleanup Foundation)



There’s a key distinction between the mass of plastic within the patch increasing – which it is – and the overall size of the patch, which does not seem to be changing. Rather, it’s just that trash within the patch seems to be accumulating, or growing more dense. The plastic is probably mostly coming from Pacific countries, Lebreton said. But it could be coming from anywhere since plastic now travels across the entirety of the ocean and has even shown up in Arctic waters, where very few humans live. That suggests the plastic traveled there from elsewhere, riding the ocean currents.

Some of the debris probably also came from the 2011 tsunami that devastated Japan and washed large amounts of waste back out to sea, the study said.

The location of the patch is in a zone of slack currents where debris arrives and then lingers, increasing in the calm waters. The study finds that, based on prior examinations dating back to the 1970s, the amount of plastic in the patch is steadily growing as more flows in than flows out – saying that plastic levels are “increasing exponentially.”

The most striking aspect of the findings – and perhaps the most damaging – was the large volume of fishing nets or “ghostnets,” said Chelsea Rochman, an assistant professor at the University of Toronto who studies marine plastic but was not part of the current study.

“This suggests we might be underestimating how much fishing debris is floating in the oceans,” she said in an emailed comment. “Entanglement and smothering from nets is one of the most detrimental observed effects we see in nature.”

The fact that the plastic content of the patch is increasing is consistent with research that has been conducted on land, showing that waste volumes entering the ocean are large and increasing, said Jenna Jambeck, an environmental engineer at the University of Georgia who has studied plastic waste processes.

In a 2015 study, Jambeck found that humans are filling the oceans with an estimated 8 million tons of plastic every year, and that is expected to increase 22 percent by 2025. That matches what is now being seen in the ocean, in the form of an ever-accumulating garbage patch in the Pacific, though Jambeck also noted that much plastic sinks to the ocean bottom, and the fishing nets are being tossed in from boats, rather than dumped from the shore.

Jambeck and the research team both agree that there is far less plastic accumulating in the Pacific patch than is going in the ocean – and the study itself says that in light of how much plastic is being dumped, they would have expected volumes to be even higher.

Clearly, much plastic is sinking and doing its damage at the seafloor, or in lower depths of the ocean.

In this sense, the Great Pacific Garbage Patch is, in the end, merely the most dramatic outward symptom of a far deeper problem of enormous volumes of human waste reaching places where it was never intended to be.

Source: https://www.washingtonpost.com/news/energy-environment/wp/2018/03/22/plastic-within-the-great-pacific-garbage-patch-is-increasing-exponentially-scientists-find/?noredirect=on&utm_term=.d51b419ba5f0



The radical otherness of birds: Jonathan Franzen on why they matter

Birds are not just diverse, vivid and extraordinary. They can also save our souls – let's protect them.

For most of my life, I didn't pay attention to birds. Only in my 40s did I become a person whose heart lifts whenever he hears a grosbeak singing or a towhee calling, and who hurries out to see a golden plover that's been reported in the neighbourhood, just because it's a beautiful bird, with truly golden plumage, and has flown all the way from Alaska. When someone asks me why birds are so important to me, all I can do is sigh and shake my head, as if I've been asked to explain why I love my brothers. And yet the question is a fair one: why do birds matter?

My answer might begin with the vast scale of the avian domain. If you could see every bird in the world, you'd see the whole world. Things with feathers can be found in every corner of every ocean and in land habitats so bleak that they're habitats for nothing else. Grey gulls raise their chicks in Chile's Atacama desert, one of the driest places on Earth.

Emperor penguins incubate their eggs in Antarctica in winter. Goshawks nest in the Berlin cemetery where Marlene Dietrich is buried, sparrows in Manhattan traffic lights, swifts in sea caves, vultures on Himalayan cliffs, chaffinches in Chernobyl. The only forms of life more widely distributed than birds are microscopic.

To survive in so many different habitats, the world's 10,000 or so bird species have evolved into a spectacular diversity of forms. They range in size from the ostrich, which can reach 2.7 metres (9ft) in height and is widespread in Africa, to the aptly named bee hummingbird, found only in Cuba. Their bills can be massive (pelicans, toucans), tiny (weebills) or as long as the rest of their body (sword-billed hummingbirds). Some birds – the painted bunting in Texas, Gould's sunbird in South Asia, the rainbow lorikeet in Australia – are gaudier than any flower. Others come in one of the nearly infinite shades of brown that tax the vocabulary of avian taxonomists: rufous, fulvous, ferruginous, bran-coloured, foxy.

Birds are no less diverse behaviourally. Some are highly social, others anti. African queleas and flamingos gather in flocks of millions, and parakeets build whole parakeet cities out of sticks. Dippers walk alone and underwater, on the beds of mountain streams, and a wandering albatross may glide on its three-metre wingspan 500 miles away from any other albatrosses.



I've met friendly birds, like the New Zealand fantail that once followed me down a trail, and I've met mean ones, like the caracara in Chile that swooped down and tried to knock my head off when I stared at it too long. Roadrunners kill rattlesnakes for food by teaming up on them, one bird distracting the snake while another sneaks up behind it. Bee-eaters eat bees. Leaf-tossers toss leaves. Thick-billed murrelets can dive underwater to a depth of 213 metres (700ft), peregrine falcons downward through the air at 240 miles an hour. A wren-like rushbird can spend its entire life beside one half-acre pond, while a cerulean warbler may migrate to Peru and then find its way back to the tree in New Jersey where it nested the year before.

Birds aren't furry and cuddly, but in many respects they're more similar to us than other mammals are. They build intricate homes and raise families in them. They take long winter vacations in warm places. Cockatoos are shrewd thinkers, solving puzzles that would challenge a chimpanzee, and crows like to play. (On days so windy that more practical birds stay grounded, I've seen crows launching themselves off hillsides and doing aerial somersaults, just for the fun of it, and I keep returning to the [YouTube video](#) of a crow in Russia sledding down a snowy roof on a plastic lid, flying back up with the lid in its beak, and sledding down again.) And then there are the songs with which birds, like us, fill the world. Nightingales trill in the suburbs of Europe, thrushes in downtown Quito, hwameis in Chengdu. Chickadees have a complex language for communicating – not only to each other but to every bird in their neighbourhood – about how safe or unsafe they feel from predators. Some lyrebirds in eastern Australia sing a tune their ancestors may have learned from a settler's flute nearly a century ago. If you shoot too many pictures of a lyrebird, it will add the sound of your camera to its repertoire.

But birds also do the thing we all wish we could do but can't, except in dreams: they fly. Eagles effortlessly ride thermals; hummingbirds pause in mid-air; quail burst into flight heart-stoppingly. Taken all together, the flight paths of birds bind the planet together like 100bn filaments, tree to tree and continent to continent. There was never a time when the world seemed large to them. After breeding, a European swift will stay aloft for nearly a year, flying to sub-Saharan Africa and back, eating and moulting and sleeping on the wing, without landing once. Young albatrosses spend as many as 10 years roving the open ocean before they first return to land to breed. A bar-tailed godwit has been tracked flying nonstop from Alaska to New Zealand, 7,264 miles in nine days, while a ruby-throated hummingbird may burn up a third of its tiny body weight to cross the Gulf of Mexico. The red knot, a small shorebird species, makes annual round trips between Tierra del Fuego and the Canadian Arctic; one long-lived individual,

named B95 for the tag on its leg, has flown more miles than separate the Earth and the moon.

There is, however, one critical ability that human beings have and birds do not: mastery of their environment. Birds can't protect wetlands, can't manage a fishery, can't air-condition their nests. They have only the instincts and the physical abilities that evolution has bequeathed to them. These have served them well for a very long time, 150m years longer than human beings have been around. But now human beings are changing the planet – its surface, its climate, its oceans – too quickly for birds to adapt to by evolving. Crows and gulls may thrive at our garbage dumps, blackbirds and cowbirds at our farms' feedlots, robins and bulbuls in our city parks. But the future of most bird species depends on our commitment to preserving them. Are they valuable enough for us to make the effort?

Value, in the late Anthropocene, has come almost exclusively to mean economic value, utility to human beings. And certainly many wild birds are usefully edible. Some of them in turn eat noxious insects and rodents. Many others perform vital roles – pollinating plants, spreading seeds, serving as food for mammalian predators – in ecosystems whose continuing wildness has touristic or carbon-sequestering value. You may also hear it argued that bird populations function, like the proverbial coal-mine canary, as important indicators of ecological health. But do we really need the absence of birds to tell us when a marsh is severely polluted, a forest slashed and burned, or a fishery destroyed? The sad fact is that wild birds, in themselves, will never pull their weight in the human economy. They want to eat our blueberries.

What bird populations do usefully indicate is the health of our ethical values. One reason that birds matter – ought to matter – is that they are our last, best connection to a natural world that is otherwise receding. They're the most vivid and widespread representatives of the Earth as it was before people arrived on it. They share descent with the largest animals ever to walk on land: the house finch outside your window is a tiny and beautifully adapted living dinosaur. A duck on your local pond looks and sounds very much like a duck 20m years ago, in the Miocene epoch, when birds ruled the planet. In an ever more artificial world, where featherless drones fill the air and Angry Birds can be simulated on our phones, we may see no reasonable need to cherish and support the former rulers of the natural realm. But is economic calculation our highest standard? After Shakespeare's King Lear steps down from the throne, he pleads with his elder two daughters to grant him some vestige of his former majesty. When the daughters reply that they

don't see the need for it, the old king bursts out: "O, reason not the need!" To consign birds to oblivion is to forget what we're the children of.

A person who says, "It's too bad about the birds, but human beings come first" is making one of two implicit claims. The person may mean that human beings are no better than any other animal – that our fundamentally selfish selves, which are motivated by selfish genes, will always do whatever it takes to replicate our genes and maximise our pleasure, the non-human world be damned. This is the view of cynical realists, to whom a concern for other species is merely an annoying form of sentimentality. It's a view that can't be disproved, and it's available to anyone who doesn't mind admitting that he or she is hopelessly selfish. But "human beings come first" may also have the opposite meaning: that our species is uniquely worthy of monopolising the world's resources because we are not like other animals, because we have consciousness and free will, the capacity to remember our pasts and shape our futures. This opposing view can be found among both religious believers and secular humanists, and it too is neither provably true nor provably false. But it does raise the question: if we're incomparably more worthy than other animals, shouldn't our ability to discern right from wrong, and to knowingly sacrifice some small fraction of our convenience for a larger good, make us more susceptible to the claims of nature, rather than less? Doesn't a unique ability carry with it a unique responsibility?

A few years ago in a forest in north-east India, I heard and then began to feel, in my chest, a deep rhythmic whooshing. It sounded meteorological, but it was the wingbeats of a pair of great hornbills flying in to land in a fruiting tree. They had massive yellow bills and hefty white thighs; they looked like a cross between a toucan and a giant panda. As they clambered around in the tree, placidly eating fruit, I found myself crying out with joy. It was the sheer gorgeous fact of the great hornbill, which couldn't have cared less about me.

The radical otherness of birds is integral to their beauty and their value. They are always among us but never of us. Their indifference to us ought to serve as a chastening reminder that we're not the measure of all things. The stories we tell about the past and imagine for the future are mental constructions that birds can do without. Birds live squarely in the present. And at present, although our cats and our windows and our pesticides kill billions of them every year, and although some species have been lost for ever, their world is still very much alive. In every corner of the globe, in nests as small as walnuts or as large as haystacks, chicks are pecking through their shells and into the light. Source <https://www.theguardian.com/environment/2018/mar/23/the-radical-otherness-of-birds-jonathan-franzen-on-why-they-matter>



Possible effects of climate change in Botswana

1. Rare breeding birds face extinction

As the temperature increases and their habitats start to change, some birds are being forced to move southwards in search of a new home. Scientists predict that as a result some birds are at high risk of extinction, as their homes start to change and disappear.

2. New species colonise Botswana

However, the warmer temperatures could be good news for those birds who only have a toe-hold in Botswana. Some species may have had a substantial increase to their range in recent years, but experts believe the warmer weather will give them extra opportunities to colonise.

3. Early arrivals and delayed flights

Swallows are a quintessential summer bird – you can't truly prepare for summer until you've seen your first swallow dancing in the evening sky. These amazing birds migrate thousands of miles to and from Europe each year. On average these birds are now arriving in Europe 15 days earlier than they did in the 1960s, while delaying their return journey meaning they are spending up to 4 weeks longer in the Northern hemisphere each year.

3. Birds stopping over winter

Instead of migrating north, some birds are choosing to stay over in Botswana because temperatures are suitably milder.



Adapted from RSPB article: <https://www.rspb.org.uk/our-work/rspb-news/news/stories/6-work-climate-change-is-impacting-birds-in-the-uk/#y0SwZWzgpVFSwSq8.99>

Photo credit: Willow warbler – BLB photo library

Word Bank				
crow	duck	eagle	ostrich	owl
parrot	penguin	robin	seagull	sparrow

U	P	X	J	J	R	O	B	I	N	Y	D	J	V	B	I
H	N	A	C	W	F	S	H	E	N	K	K	B	V	S	F
K	Z	O	R	O	X	Z	P	B	K	S	X	W	H	E	C
P	Z	S	O	R	S	E	I	A	X	O	W	L	K	A	E
Q	J	T	I	X	O	K	U	L	R	P	M	G	E	G	N
N	U	R	M	U	H	T	C	A	W	R	L	X	P	U	L
W	X	I	V	P	D	T	R	R	M	F	O	W	D	L	Y
T	Y	C	O	K	D	E	P	G	O	O	T	W	U	L	N
K	C	H	E	A	G	L	E	E	X	W	P	Z	C	R	A
P	E	N	G	U	I	N	I	M	I	L	X	G	K	Y	A

THE YEAR OF THE BIRD – 2018

“If you take care of the birds, you take care of most of the big environmental problems in the world.”—Thomas E. Lovejoy, Tropical Conservation Biologist and National Geographic Fellow

2018 marks the centennial of the Migratory Bird Treaty Act, the most powerful and important bird-protection law ever passed. In honor of this milestone, National Geographic, the National Audubon Society, the Cornell Lab of Ornithology and BirdLife International will join forces with more than 100 other organizations and millions of people around the world to celebrate 2018 as the “**Year of the Bird.**”

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