



# Wakkerstroom Bird Club



**Affiliated to BirdLife South Africa**

**Principal supporter of the Wakkerstroom Junior Bird Clubs**

## NEWSLETTER NUMBER 79 – AUGUST 2020

Hello fellow Birders,

This weekend saw the first monthly Saturday Vlei Visit in many a month – local bird watchers came out of hibernation to share some well-earned chat, coffee and muffins, as well checking what the local bird population has been up to since lockdown started in March. It's a beautiful warm weekend here, and something seems to be whispering “SPRING” out there, but we know we'll still be appreciating our heaters and wood stoves for a while. Apparently it has been the coldest Wakkerstroom winter in over 80 years, with some nights going down to a quite ridiculous -18C (after June's relatively mild -14C). The plumbers and handymen in town have been entertaining themselves again with burst pipes, broken geysers, and the resultant damage they caused, while birds on the vlei were seen cautiously trying out their ice skating skills in the early mornings.

*Here is Brian Guerin's view of Saturday morning:*

A magnificent, sunny and warm morning welcomed the people that ventured out birdwatching this Saturday morning. A nice surprise was to have Jenni and Peter Russell out and enjoying the weather, welcome back to both of you. Birding lived up to the weather and produced 48 species, a very good list for mid-winter.

Surprise of the day probably goes to a lone Grey-headed Gull, posing in the water and flying around. This gull, familiar to beachgoers on all our coasts, has only been recorded in 13 weeks of the approximately 576 weeks of the Pentad Survey! Our first true migrant of the season in the form of a Common Sandpiper also appeared. Black-winged Stilt, as well as Malachite and Giant Kingfisher also made the day something special! On the subject of migrants, Elize McAllister reported an altitudinal migrant, Amethyst Sunbird, on two occasions this week – time to start the Migrant Survey as well!

*(Photo: Grey-headed Gull, courtesy Wikipedia)*



## Britain's second Bearded Vulture

*Here's something a bit different – our own Mike Maxted reporting from his new home in Bury, England, on an exciting day:*

I left home at 5am to travel about 60 miles to the Peak District national park, I arrived at 6h20 there were about 20 cars in the car park, a young couple arrived who had also heard about the bird, but like me did not know the area and the directions were not very precise. So after studying all the posted maps and none the wiser except having a general direction we struck out past the Derwent Water dam wall where the Dam Busters practised before going to destroy the German dams in the Rhine-Ruhr valley during World War 2, about half way up I got a brief view of the Vulture disappearing off to the west.



*Derwent Water Dam Wall*



*The view down to the A57 (Snake Pass)*

We just kept following the trail ever higher as my theory was the higher we were the more chance we would have of seeing the vulture. Eventually we rounded a corner and saw about 20 birders on top of the hill Lost Boy and another 30 on Black Tor, we spoke to both groups and decided to return to Lost Boy where we settled down to wait.



*High Moors*



About an hour later we met a man coming back from Howden Moors who told us that the vulture was back at the roost, we hiked down into the valley past a beautiful stream then up again onto Howden Moor and about a further 40 birders already up there.



*View from Lost Boy towards the roost site we had to climb to the top of the hill on the left of the valley*

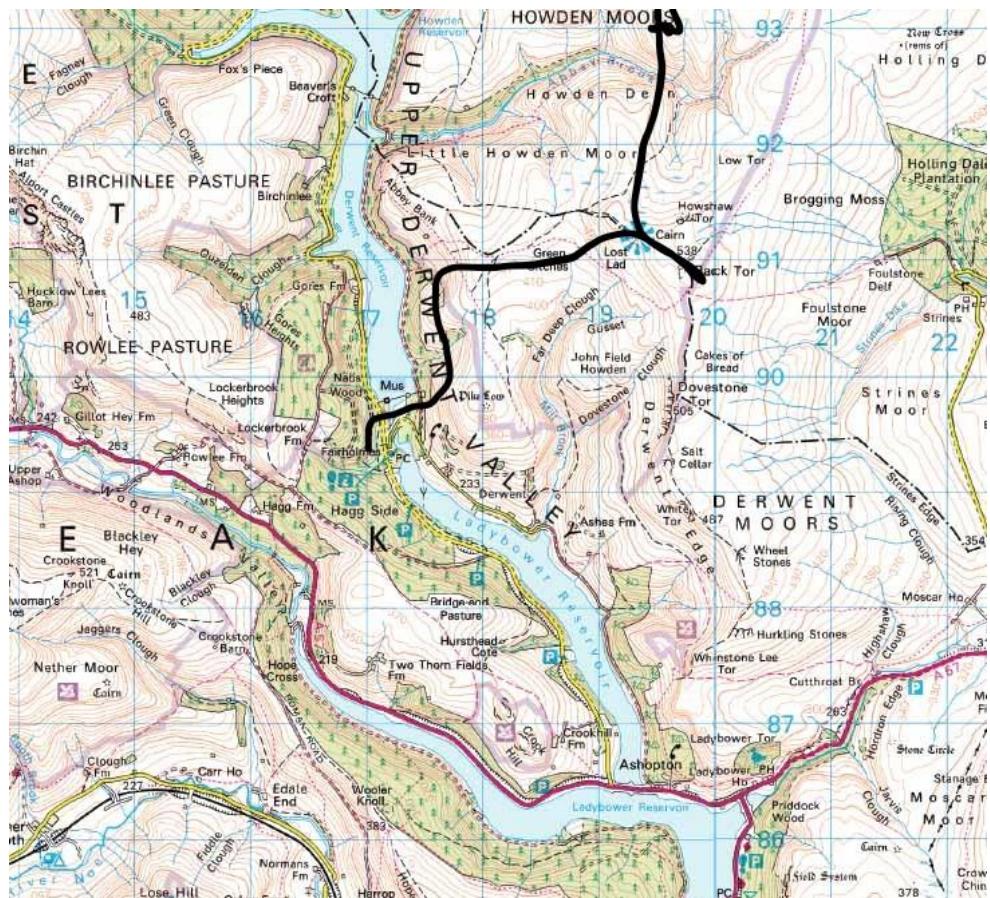


*Vulture at roost*

I got 2 shots then started to get comfortable for more pictures when the vulture took off and flew beneath us, I got one shot off before the vulture flew about 20m over our heads.



The Vulture flew off towards the west and as it was 2 pm, it had been drizzling on and off all day and the wind was blowing I decided to make my way home tired but elated. By the time I got back to the car my ebird track said I had covered 16 km.



*The route I walked*



*Derwent Water*



*Old Bridge at Derwent*

Thank you Mike, sounds like a brilliant day!

## **Conservation Conversations” - Webinars with BirdLife South Africa**

This series of interactive Webinars has proved to be most interesting and informative. Shown each Tuesday evening at 7pm on Zoom and Facebook they are highly recommended. Set out below is the programme till the end of September.

In addition past webinars can be seen also by googling BirdLife South Africa Home/Conservation Conversations on YouTube. We recommend the webinar from 7 July by Dr Hanneline Smit-Robinson, Robin Colyn and Dr Kyle Lloyd-White on three decades of White-Winged Flufftail conservations as an appetizer.

Mark D. Anderson - *Kimberley's Pink Gems: conserving the Lesser Flamingo* (4-Aug-20 at 19:00)

Reason Nyengera - *Life at Sea save Albatrosses* (11-Aug-20 at 19:00)

Linda van den Heever, Prof Vinny Naidoo, Lizanne Nel & Ian Rushworth - *The impacts of lead on wildlife in South Africa* (18-Aug-20 at 19:00)

Dr Warwick Tarboton & Fanie du Plessis - *What 20 years of the Nylsvley Woodland Bird Census has taught us* (25-Aug-20 at 19:00)

Dr Andrew Jenkins & Anthony van Zyl - *Taita Falcon: Africa's rarest raptor* (1-Sep-20 at 19:00)

Dr Melissa Howes-Whitelock & Kyle Walker - *Saving South Africa's Secretarybirds* (8-Sep-20 at 19:00)

Kristi Garland - *Junior Bird Clubs: are they for us and where do we start* (15-Sep-20 at 19:00)

Dale Wright - *Adventures at the coalface: Conservation in Madagascar, Tanzania & South Africa* (22-Sep-20 at 19:00)

Dr Melissa Lewis - *Making Flyway Conservation a Reality* (29-Sep-20 at 19:00)

## **Virtual African Bird Fair** by BirdLife South Africa CEO, Mark Anderson

BirdLife South Africa is excited to announce that the ever-popular African Bird Fair is being brought into your homes on 5 September 2020... VIRTUALLY!



The Virtual African Bird Fair promises to be a highlight on our Avitourism calendar and is coming to a living room near you - or wherever you decide to get comfortable for a day of informative and entertaining talks, presentations, auctions and much more. There will be something of interest for everyone!

We can't wait for you to join us!

*More details closer to the time – a good one to diarise!*

### **BirdLife South Africa Celebrates Women's Month** by Mark Anderson

BirdLife South Africa is celebrating Women's Month by featuring a women birder, ornithologist, conservationist, or guide each day. South Africa celebrates Women's Day on 9 August as a tribute to the brave women who on that day in 1956 marched to the Union Buildings to protest the extension of Pass Laws to women. Even today, gender representation remains a pressing issue and in some ways the playing field is still asymmetric – as it is when humans dominate nature.

BirdLife South Africa is privileged to employ a whole contingent of dynamic women and has strong female representation on its Board of Directors. Its Honorary President and some Honorary Patrons, as women, have made an impact in their own right and continue to contribute to 'Giving conservation wings'. Female community bird guides, trained by BirdLife South Africa, are among the trailblazers in the Avitourism industry and women lead some of our associated bird clubs. African Birdlife, BirdLife South Africa's bi-monthly magazine, is driven by a woman-only team.

We start off with our new Honorary President, Prof Anusuya Chinsamy-Turan.



Prof. Chinsamy-Turan is a globally renowned palaeontologist specializing in the biology of dinosaurs and early birds, especially in the fields of bone and teeth histology. After completing her studies in Johannesburg and Pennsylvania, USA, she served as the Director of Iziko Museum's Natural History Collections before taking up a permanent position at the University of Cape Town (UCT), where she was awarded her professorship in 2003 and held the position of the Head of the Department of Biological Sciences from 2012-2015.

Prof. Chinsamy-Turan has had a distinguished, accolade-strewn career, including well over 100 academic publications that have been cited nearly 5000 times, and authoring four books covering the academic, popular science, and children's readerships. She was also awarded the prestigious title of "South African Woman of the Year"

in 2005 in recognition of her ceiling-shattering achievements. When not studying and reconstructing early bird ancestors, she enjoys watching extant birds in Cape Town and is a member of the UCT Birding Club.

*A disturbing article about wind turbines was just published in the Saturday Star:*

**Over 800 birds killed after colliding with turbines during four year period-study**

By Sheree Bega, Saturday Star, 30 July, 2020

Over 800 birds were killed after colliding with turbines at 20 wind energy facilities (WEFs) in South Africa between 2014 and 2018, a new study has revealed. The toll includes species of conservation concern such as endangered Cape Vultures and Black Harriers, both endemic to southern Africa.

The paper, "*On a collision course? The large diversity of birds killed by wind turbines in South Africa*" was published in Ostrich, the journal of African Ornithology, last week by the Fitzpatrick Institute of African Ornithology at UCT and BirdLife South Africa. The carcasses of 848 birds were recovered, with this figure a crude rate based on the number of carcasses found beneath the turbines, explains study author, Sam Ralston-Paton, birds and renewable energy project manager at BirdLife SA. "This will be an underestimate of the actual number of fatalities as scavengers may have removed carcasses or they might have been overlooked by the searchers or otherwise not recorded."

A "striking result" was the high diversity of birds killed: 130 species from 46 families, totalling 30% of bird species recorded at and around WEFs, including some not recorded by specialist surveys, like flufftails. Most carcasses were raptors (36%; of which 2% were owls), passerines (30%), waterbirds (11%, of which 3% were waterfowl), swifts (9%), large terrestrial species (5%), pigeons and doves (4%) and other near-passerines. Of the 130 species recorded killed, 16 were migrants.



*Photo from the BirdLife International website*

Wind energy is a clean, renewable alternative to fossil fuel-derived energy sources but many birds are at risk from collisions with wind turbines, write the authors. SA has the greatest installed wind energy generating capacity on the continent, with the number of operational turbines rising from 253 in 2014 to 825 in 2017. The study is the first to provide a comprehensive summary of the range of birds impacted by turbine collisions at a national scale in the southern hemisphere.

Raptors were the group most frequently found dead, "confirming their susceptibility to turbine collisions". The Jackal Buzzard was the species most often killed. With a population estimated in the tens of thousands, "population level impacts may not be significant ... but continued monitoring and additional research is recommended to help ensure this common species remains common and the ecological implications of any losses are understood." The abundant Amur Falcon was the migrant species most often killed while the endangered Cape Vulture is the species of greatest concern, "especially because the closely-related Griffon Vulture suffers very high mortality rates at WEFs in Spain".

Ten Cape Vulture collision fatalities have already been reported "despite this species' small population and its limited spatial overlap with existing WEFs. "Given the short monitoring period in our study, we anticipate more Cape Vulture fatalities in future and this could become a very serious concern if additional WEFs are constructed in the vulture's core distribution. Without careful planning, other vulture species also are likely to be impacted as WEFs are built throughout Africa, further contributing to the continent's vulture 'crisis'." With a total population of only 500 -1 000 breeding pairs, six endangered Black Harriers have been killed at local sites. "If this trend continues, wind energy facilities could pose a significant threat to the survival of the species."

Verreaux's Eagles, too, appear to be particularly susceptible, with four birds killed at one wind farm in three months and two fatalities at different WEFs. Four nationally endangered Martial Eagles were killed as well as 21 other eagles from four species. "Every effort must be made to site wind energy facilities away from important areas for birds, particularly raptors. Species at risk should become a key focus of environmental impact assessments and strategic environmental assessments, which are important tools to reduce the impacts of wind energy developments."

*Phew, something a lot more cheerful is needed after that ....even if not a local story:*

**Hummingbirds see colours we can only imagine**    *Posted by Deborah Byrd in EARTH, 23 June 2020*



*Male broad-tailed hummingbird. Researchers trained birds like these to perform experiments that revealed that the birds see colours invisible to human eyes. Image via Noah Whiteman (UC-Berkeley)/ [Princeton University](#).*

You know the old idea that dogs see only in shades of grey? Studies have shown that's not true. Dogs do see some colours, though their colour vision doesn't reveal a world as richly or intensely coloured as the world we see. Now a new study by scientists, published this month in the peer-reviewed journal *Proceedings of the National Academy of Sciences*, shows that our human colour vision can't compete with that of wild hummingbirds. These fleet little birds perceive a world far more richly hued than ours, full of visual cues humans never notice, via colours we can't imagine.

In fact, said evolutionary biologist Mary (Cassie) Stoddard at Princeton: "Humans are colour-blind compared to birds and many other animals."

When it comes to colour vision, you can thank the cone cells in the retina of your eye. Humans have three types of colour cones, making us sensitive to red, green and blue light. Birds have a fourth colour cone that can detect ultraviolet light. The tiny hummingbirds also see combination colours like ultraviolet+green and ultraviolet+red, according to the new research. The hummingbirds rely on their heightened colour sense to find food, dazzle mates, escape predators and navigate diverse terrain, these scientists said.

To investigate how birds perceive colour, Stoddard and her research team explored bird colour vision in a natural setting. They worked at the Rocky Mountain Biological Laboratory in Gothic, Colorado, training wild broad-tailed hummingbirds (*Selasphorus platycercus*) to participate in colour vision experiments. In the scientists' statement, Stoddard explained:

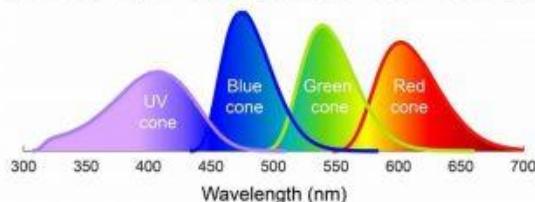
Most detailed perceptual experiments on birds are performed in the lab, but we risk missing the bigger picture of how birds really use colour vision in their daily lives.

Hummingbirds are perfect for studying colour vision in the wild. These sugar fiends have evolved to respond to flower colours that advertise a nectar reward, so they can learn colour associations rapidly and with little training.

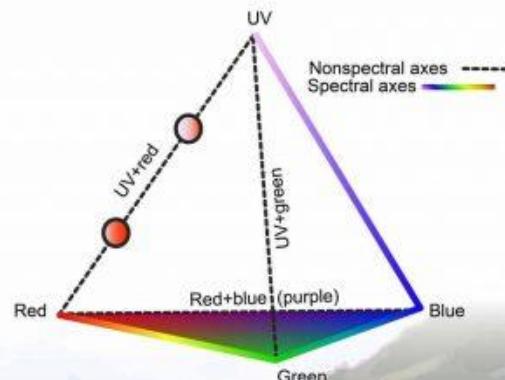
The team said it was particularly interested in nonspectral colour combinations, which involve hues from widely separated parts of the colour spectrum. That's as opposed, they said: "... to blends of neighbouring colours like teal (blue-green) or yellow (green-red). For humans, purple is the clearest example of a nonspectral colour. Technically, purple is not in the rainbow: it arises when our blue (short-wave) and red (long-wave) cones are stimulated, but not green (medium-wave) cones. While humans have just one nonspectral colour – purple – birds can theoretically see up to five: purple, ultraviolet+red, ultraviolet+green, ultraviolet+yellow and ultraviolet+purple."



*To other hummingbirds, this male's magenta throat feathers likely appear as an ultraviolet+purple combination colour. Image via David Inouye (U. of Maryland-College Park)/ [Princeton University](#).*

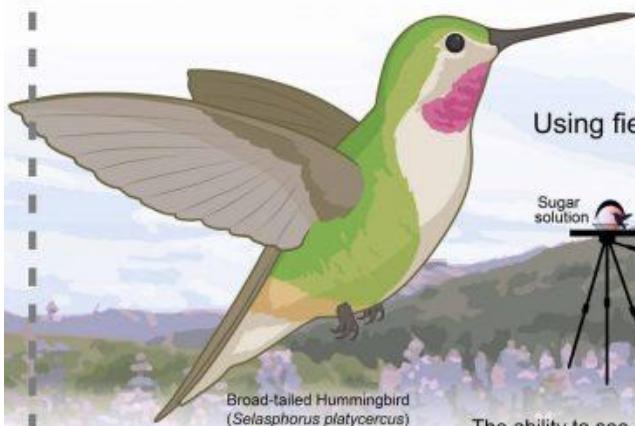


The colors birds can see are often represented in a tetrahedral color space.



### Most birds have four color cone types in their eyes.

While human cones can detect blue, green and red light, birds have a fourth cone that can detect UV. Birds can potentially see many colors humans cannot, including several nonspectral colors made by combining widely separated parts of the light spectrum. UV+red is a nonspectral color because it mostly stimulates cones sensitive to UV and red light.



Using field experiments, we demonstrated that wild hummingbirds can perceive a variety of nonspectral colors.



In this experiment, birds discriminated between two different UV+red colors.

The ability to see many nonspectral colors is probably widespread in birds and other animals.

STODDARD, MC, EYSTER, HN, HOGAN, BG, MORRIS, DH, SOUCY, ER & INOUYE, DW. WILD HUMMINGBIRDS DISCRIMINATE NONSPECTRAL COLORS. 2020. PNAS.

Infographic: STODDARD LAB. Hummingbird: Created with Biorender.com. Hummingbird silhouette: Designed by Vexels.com. Tripod: The Noun Project/Kari Gaynor, CC BY 3.0.

*Infographic by the Stoddard Lab/ Princeton University.*

Stoddard and her colleagues designed a series of experiments to test whether hummingbirds can see these nonspectral colours. They performed outdoor experiments each summer for three years, starting with a pair of custom “bird vision” LED tubes programmed to display a broad range of colours, including nonspectral colours like ultraviolet+green. Next, they performed experiments in an alpine meadow frequently visited by local broad-tailed hummingbirds.

Their statement said: “Each morning, the researchers rose before dawn and set up two feeders: one containing sugar water and the other plain water. Beside each feeder, they placed an LED tube. The tube beside the sugar water emitted one colour, while the one next to the plain water emitted a different colour. The researchers periodically swapped the positions of the rewarding and unrewarding tubes, so the birds could not simply use location to pinpoint a sweet treat. They also performed control experiments to ensure that the tiny birds were not using smell or another inadvertent cue to find the reward. Over the course of several hours, wild hummingbirds learned to visit the rewarding colour. Using this setup, the researchers recorded over 6,000 feeder visits in a series of 19 experiments. The experiments revealed that hummingbirds can see a variety of nonspectral colours, including purple, ultraviolet+green, ultraviolet+red and ultraviolet+yellow. For example, hummingbirds readily distinguished ultraviolet+green from pure ultraviolet or pure green, and they discriminated between two different mixtures of ultraviolet+red light – one redder, one less so.”

Harold Eyster, a UBC Ph.D. student and a co-author of the study, commented: “It was amazing to watch. The ultraviolet+green light and green light looked identical to us, but the hummingbirds kept correctly choosing the ultraviolet+green light associated with sugar water. Our experiments enabled us to get a sneak peek into what the world looks like to a hummingbird.”

Even though hummingbirds can perceive nonspectral colours, appreciating how these colours appear to birds can be difficult, the scientists said. Ben Hogan, a postdoctoral research associate at Princeton and a co-author of the study, commented: "It's impossible to really know how the birds perceive these colours. Is ultraviolet+red a mix of those colours, or an entirely new colour? We can only speculate."

Stoddard added: "To imagine an extra dimension of colour vision – that is the thrill and challenge of studying how avian perception works. Fortunately, the hummingbirds reveal that they can see things we cannot."

David Inouye, who is affiliated with the University of Maryland and the centre where the study took place, added: "The colours that we see in the fields of wildflowers at our study site, the wildflower capital of Colorado, are stunning to us, but just imagine what those flowers look like to birds with that extra sensory dimension."

The scientists said the wide variety of nonspectral colours available to birds is the result of their ancient four color-cone visual system. Stoddard explained: "Tetrachromacy – having four colour cone types – evolved in early vertebrates. This colour vision system is the norm for birds, many fish and reptiles, and it almost certainly existed in dinosaurs. We think the ability to perceive many nonspectral colours is not just a feat of hummingbirds but a widespread feature of animal colour vision."

That's it from Wakkerstroom for this month. Stay well, stay healthy, and keep birding.

Chris

