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Gull-billed Tern *Gelochelidon nilotica*
Photographed at a shallow farm dam 2 km west of Joyce Mine, Beatrice (see p. 49)
Photo: © Tony Wood

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GUIDELINES FOR CONTRIBUTORS

Honeyguide is an ornithological journal that accepts scientific papers and articles, short notes and observations, as well as contributions of a more general interest. Its primary emphasis is on the birds of Zimbabwe but scientific contributions from other parts of Africa, and general interest contributions from anywhere else will also be accepted. Wherever possible, articles should be submitted electronically, preferably in MS-Word using the language option 'English (Zimbabwe)' or any other variant of British English.

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The definitive internationally recognised name for any bird species is its scientific name and this should be included in all contributions except for those of general interest, such as accounts of travel or birdwatching. The scientific name given in *Roberts VII* will generally be followed although contributors should note that many names have been changed since that book was published. The Editor will endeavour to keep up to date with the changes. Common names are more of a problem since there is still some variation amongst different authorities. The journal will be flexible as far as common names are concerned and contributors may use the names they are accustomed to or most familiar with.

Contributors are urged to check previous issues of the journal for the format and style of references although the Editor will check and correct any if necessary. The editor will supply authors with PDF copies of their articles on request.

EDITORIAL

I hope readers will like the new look *Honeyguide*, now in the larger A4 format rather than A5. This represents quite a change because the journal has always been in the small A5 (or its pre-metric equivalent) since it was started over 50 years ago. Readers who have a long series of the journal may be annoyed at having to rearrange their bookshelves and I apologise for that but changing the page size to A4 has a number of advantages. Since each page can hold twice as much text, the number of pages can be reduced and the journal can be stapled rather than bound. This cuts costs and increases durability – some of my bound volumes, for instance, are starting to fall apart from frequent usage. Finally, it allows for greater flexibility in formatting and makes it easier to include photographs with their text, rather than in separate pages. Most scientific journals are now published in A4, probably because this is the easiest format for printing pdf pages and A5 or other formats are less popular nowadays.

It is necessary for me to mention a few people in this editorial. The first is of course Michael Irwin, well-known for his bird work in this country, who died in England in September last year. His life and work have been discussed previously in *Honeyguide* (Masterson, 2009. *Honeyguide* **55**: 51-34; Marshall *Honeyguide* **58**: 7-11) and obituaries have been published in ornithological journals (Dowsett, *Ibis* **160**: 714-716; Hustler & Vernon, 2018. *Ostrich* **89**: 291-293). In this issue we have a short obituary from David Ewbank and a longer article from Anthony Cizek. This is of particular interest because it is based on a long discussion between the author and Michael on the occasion of his 90th birthday in 2014. It gives an interesting insight into Michael's views and the impression he left on a member of the younger generation of ornithologists who had never worked with him.

The second person is Julia Duprée who has been the Business and Production Manager of *Honeyguide* since 1999 (possibly earlier) and transformed *Honeyguide* from a rather dowdy magazine to a very professional-looking journal, complete with colour photographs and an attractive cover. Regrettably, Julia has now resigned from her post for health reasons and I would like to thank her both personally for making my life as editor very easy, and on behalf of everyone else past or present who has been involved with *Honeyguide*. I am sure I can also thank her on behalf of the Council and members of BirdLife Zimbabwe, who may not be fully aware of how much time and effort she devoted to the production of *Honeyguide*.

The third person is our old friend Jeffrey Lendrum. I recounted his activities in my editorial in Volume 63. At that time, he had been arrested in Brazil while trying to smuggle Peregrine Falcon eggs collected in Chile. He had been granted bail and had disappeared and no one seemed to know where he was. In June 2018, a 56-year old 'Irishman' (now known to be Lendrum) was arrested at Heathrow Airport after arriving from South Africa with two vulture chicks and 17 raptor eggs. He was released on bail and one wonders if he is on the run again. The illegal trade in wildlife is now a major criminal enterprise, second only to arms and drugs, and it is disappointing that someone raised in Zimbabwe should be involved with it.

Finally, I need to address the members of BLZ. Readers will be aware that *Honeyguide* articles tend to be written by a rather small group of people. We need more contributors and anyone interested in birds will surely have seen things of interest – these will remain unknown if they are not sent in. **We need your contributions: *Honeyguide* cannot survive without them.**

ERRATA

Alert readers will have noticed three editorial errors in the previous issue of *Honeyguide* (Volume 63, 2017).

The first was that David Ewbank's article on the African Barred Owlet in southern Matabeleland (pp. 75-76) had already been published in Volume **62**(2), pp. 112-113. This was the result of me failing to move this item from my 'working' folder to my 'published' folder.

The next two were in the captions to two photographs in the centre spread. On p. iii the Pied Wheatear was given the scientific name *Neophron percnopterus* which is of course the name of the Egyptian Vulture. The correct scientific name, given in the text, is *Oenanthe pleschanka*.

Finally, on p. iv the Black-winged (Fire-crowned) Bishop *Euplectes hordeaca* was misidentified as the Zanzibar Red Bishop *E. nigroventris*. As its scientific name suggests, in this species the ventral part of the breeding male's body is black from the face to the abdomen, as shown in the photograph opposite. It is the only one of the four red bishops in which the breeding male lacks a red collar at the front.



Zanzibar Red Bishop *Euplectes nigroventris*
Photo © Bassel Abi Jumaa

Farewell to Michael Irwin

The passing of Michael Irwin leaves a hole in Zimbabwe and African ornithology that cannot be filled. He arrived in Zimbabwe in 1949 at the start of what he called his 65-year safari, carrying a letter of recommendation from the British Museum, but without qualifications or experience this didn't lead to anything. He needed to make a name for himself which he did with a bang in the 1950s, travelling as far as Kenya to collect specimens. He liked nothing better than to be dropped off somewhere just with a skinner for a week to survey the local avifauna. He collected more than just birds and gained a wide knowledge of the ecosystems of Zimbabwe and Central Africa. By 1957 he was well known enough to be a co-author of the first modern checklist of Southern Rhodesian birds and within a few years came to be appointed to the Ornithology Department at the Natural History Museum in Bulawayo. There he proceeded to turn the small collection of some one thousand specimens into the largest collection in Africa.

His primary interest was speciation and evolution of birds, to which end he named many new subspecies on morphological and plumage differences. This approach has now been superseded by DNA studies but some of the subspecies he named have now been elevated into species. He was involved in the description of only one new species but, sadly, genetic studies have shown it is probably an aberrant Golden-rumped Tinkerbird. His *Bibliography of the birds of Rhodesia*, published in 1978, was a pioneering attempt to cover all the ornithological literature of a single African country. He was invited to contribute to the multi-volume *Birds of Africa*, while his review of sunbird classification was used in a modern monograph of this group. His most important contribution was *The birds of Zimbabwe* (1981), the first comprehensive monograph on the birds of this country since Priest (1933-36).

I first met him in 1976 when he had been moved upstairs into administration but when he did come down, he was a fire of knowledge, always wondering what we were doing and asking probing questions which often took weeks (or years!) to answer. By the time I returned to Zimbabwe in 1983 he had left the museum and was living in a house quite close to mine and I would walk up to him occasionally in the holidays. By then he had begun his long editorship of *Honeyguide* taking it from a local bird magazine to a serious scientific journal. As an editor he was constantly questing and checking to get the best out of his authors and their contributions. The local bird club held a quiz at his house in 1989 to see who could identify most of the bird paintings on his wall; Penny Feather was the winner and I came second. The prize was a 19th-century bird painting – some beautiful sunbird and hummingbird pictures that still hang on my wall to remind me of him. The last time I saw him in Harare he was then the BLZ librarian, which he must have loved as it gave him access to a wide range of bird publications.

He later moved to England and lived quite close to me, sending me a stream of letters full of interesting questions. We discussed, for example, his *Honeyguide* article on the Eastern Bronze-naped Pigeon in which he maintained that this bird had recently expanded its range in the Eastern Highlands. I pointed out that in his book he described it as a 'most elusive bird' and I suggested that it may have been overlooked if not calling. But he maintained that Carp, Benson and Jackson were competent observers who wouldn't have overlooked this bird. We also discussed the earliest passerines (his favourite), which genetic studies suggest may have evolved in the Cretaceous although the earliest fossils date from the Eocene. Towards the end he was thinking about possible new species of snipe and swallow.

I received his last letter three months before his death, which showed his brain was just as active and lively as ever. After his last Christmas in 2016 he wrote me that his best Christmas present was the latest *Honeyguide*. Around a month or two later he bought *HBW Illustrated Bird Checklist Volume 2* which he said was the last book he would ever buy.

Farewell Michael; may there be exciting woodlands in the next world full of passerine birds for you to explore. This is what he always loved best and he now rests in peace under a grove of pine trees.

David Ewbank



Michael Irwin in his natural habitat: The Ornithology Department at the Natural History Museum.
Photo © Natural History Museum of Zimbabwe, Bulawayo.

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Michael Irwin: Collector and Scientist (1925-2017)

Anthony Cizek

Introduction

African ornithology has lost a giant. Today, we take field-guides for granted, but they are the result of a great accumulation of knowledge in the twentieth century, and Michael Irwin was part of the generation that laid its foundations. Much of this collective knowledge was built up from the remarkable collection of bird study skins he assembled in Bulawayo, and he played a role in the growth of a museum tradition in his adopted home of Zimbabwe. MPSI – as he was known to generations of Rhodesian and Zimbabwean bird-watchers – also contributed to the growth of a popular natural history tradition in the country.

He witnessed extraordinary social and scientific changes over his lifetime. He came from the Victorian tradition of the amateur scholar, and he watched the shift in his field towards the tertiary-educated career biologist, which was, in part, a reaction to the massive changes in the state of the planet. Taxonomy and systematics were revolutionised by the development of molecular techniques – and the move away from morphology to the primacy of genetic evidence. Yet, there is much to learn from his approach to identifying the diversity of African birdlife. Here, I'll explore how successful he was, and present some of his perspectives, based on recorded interviews conducted to mark his ninetieth birthday.

MPSI's approach and systematic contributions

MPSI spent a lifetime with study skins, working at the Natural History Museum of Zimbabwe, Bulawayo, from 1956 to 1982 as an assistant, then keeper and curator of ornithology, later becoming director. He built one of the most important collections of African bird study skins in the world – which was used to describe much of the extraordinary diversity 'from Kakamega to the Kalahari'. His interest in birds was born of the Victorian era's sense of wonder in the natural world. As a boy in Northern Ireland, 'my grandmother reached up to the top of her wardrobe and presented me with the bird-of-paradise feathers she had saved from her Victorian and Edwardian hats. What an inspiration that was to a young mind!'

'You have to have a particular cast of mind to be a museums man…you have to be a *collector*', and, even three decades after leaving the museum, MPSI could recount the backstories to the more than 90,000 bird skins in Bulawayo's treasure-house; who collected the skin, where, and how the Zimbabwean natural history museum came by it. 'What a very wonderful experience it was…at Tervuren [the Royal Museum for Central Africa, Belgium] to be handed the unique type of *Phodilus prigogenei* [the Congo Bay Owl] by no less than Dr Henri Schouteden himself.' Or, 'To open a drawer and there is a Bornean Bristlehead: *Oh! It is lovely*.'

But, for MPSI, specimens were much more than *objets d'art*. It was 'a *love* for Nature expressing itself in the material sense.' That is, for what a series of study skins can tell us about how our birdlife has evolved, for discovering the patterns and processes of life.

He had an innate ability to decipher patterns. For instance, in the early 1950s, when he was working for (then) Rhodesian Railways, he spent his time off at the museum in Bulawayo and noticed that four longclaw specimens from the Chitunta Plains in northern Zambia represented a new species. The museum's director, Reay Smithers, sent the specimens to James Chapin in New York and Claude Grant in London, neither of whom agreed.

'But it couldn't have been [*Macronyx*] *ameliae* and it wasn't *capensis*. It was undescribed…It was obvious. But – in those days – you didn't make your own decisions. You sent it to the expert in America, or the expert in England, and if they said it was [so] then that was it… A couple of years later, Con Benson came down to Bulawayo from (then) Northern Rhodesia, opened the drawer, and described it' – *Macronyx grimwoodi* Grimwood's Longclaw.

He was prolific: his half-century bibliography (Irwin 2001) ran to more than three hundred books, chapters, articles and short communications, while he contributed another 86 items to *Honeyguide* from then up to 2016. While employed at the Bulawayo Museum, he described eighteen subspecies from across the Zambezian Biome (as defined by Fishpool & Evans 2001), from Angola and Zambia to southern Mozambique. It's possible that an appreciable number of these would be considered full species using current molecular concepts. He also described the White-chested Tinkerbird *Pogoniulus makawai* – which has become the stuff of legend.

But it was in his systematic assessments that he made such a valuable contribution. The scientific exploration of southern Africa in the 19th century led to the description of a large number of taxa, the status of which needed continual reassessment as the subcontinent was explored further and more information collected. For example, Roberts (1946) lumped all of the taxa described in the 'grey tit' complex in Southern Africa into just two species – *Parus afer* (Grey Tit) and *P. cinerascens* (Ashy Tit) – but later fieldwork by MPSI revealed that appreciable morphological differences in sympatric taxa on the Zimbabwean Plateau were driven by ecological separation. So he resurrected *P. griseiventris*, first described by Reichenow in 1882, as the Miombo Grey Tit (Irwin 1956, 1959).

Gerlof Mees (1970), Curator of Vertebrates at the Western Australian Museum and Rijksmuseum [now Naturalis] in Leiden, wrote of 'the staggering amount of systematic work that has been done in southern Africa over the past twenty years' by MPSI and his contemporaries, notably Phillip Clancey. But he also recognised the disagreements over the validity of taxa, quoting Clancey (1967): 'Tiresome arguments in the periodic literature on the validity of minor subspecies, which interest a mere handful of systematists...do science no good... The arguments often appear...lacking in objectivity'.

This is the source of much of the disagreement: just how different do populations need to be before they are recognised as subspecies? Subspecific variation is important because, as Clancey (1967) noted, species evolve from races or subspecies. A tendency to 'lump' fails to recognise all of the diversity, while excessive 'splitting' litters the literature with spurious diversity of populations. MPSI ploughed the middle ground, seeking to describe diversity with biological meaning. Recognising minor subspecies was not the way MPSI worked.

His approach was to place the taxon in its environment, to try to understand the *processes* driving the pattern. That was the source of his objectivity: can differences in morphology of the different populations be explained by clues to their reproductive isolation? Are there geographical patterns to the variation? Reproductive isolation can occur in sympatric populations if they live in different habitats – so, fundamental to developing objectivity is to know as much about the spatial patterns of the habitats of south-central Africa as possible.

Unlike some of his contemporaries, MPSI loved the *bundu* and collected across most of the Zambezian Biome (in all seasons). And unlike the museum men working to the north of (then) Southern Rhodesia who had staff help with collecting – the most well-known being Jali Makawa – he did this himself. Out into the field getting to know the exceptional diversity of landscapes and habitats of south-central Africa, so that the bird diversity he described has ecological meaning. The paper on how the major river valleys act as biogeographic barriers (Benson *et al*. 1962), for example, is a standard text.

There must be few with such a nuanced understanding of the processes driving speciation in African birds. The high species turnover in the apalises came up in our discussion: 'It's the canopy species which show such diversity, not the edge species', where the Bar-throated Apalis *Apalis thoracica* occurs in edge habitats right across the eastern half of Africa. There is a 'speciation blockage.'

The idea that edge habitats are more likely to be 'blocked' seemed novel (to me at least) and I made a note to read up on this.

He developed some big, overarching ideas about the importance of behaviour to reproductive isolation, too. For example, in discussing why the passerines have speciated so much more than the non-passerines, Storrs Olson (2001) emphasised the importance of nest-building, noting: 'That the ability of passerines to protect their eggs and young [in such a diversity of types of nests] may have led to their success as a group is not a new idea, having been advanced clearly and in some detail by Irwin (1962) in an otherwise obscure publication that has since been widely overlooked.'



MPSI in the field with Phillip Clancey (right)

How systematics has changed

MPSI recognised the major contribution molecular studies can make, especially at higher levels in the tree of life. But he was flummoxed when the Pennant-winged and Standard-winged nightjars (formerly *Macrodipteryx vexillarius* and *M. longipennis)* were lumped with all other nightjars in the genus *Caprimulgus* based on genetic evidence alone. Unlike other nightjars these species are polygynous, form leks, rely on visual displays rather than calls in addition to their extraordinary morphological modification, the amazingly long wing feathers. Does the fact that all of these characters directly influence their breeding systems and reproductive potential 'mean nothing now'?

He was also nonplussed by the trend to recognise species which look the same but have been isolated for long enough to produce molecular differences. He opened the volume of the *Handbook of the Birds of the World* describing species recognised since the start of this mammoth project. 'How are all of these *Scytalopus* species different? Surely, they are simply the same thing isolated on a number of different [South American] mountains? … Why would the Bokmakieries isolated in the Chimanimanis change [morphologically] if there is no need to [because the environment has been so stable for millennia]?' So, for MPSI, if it looks like a Bokmakierie and behaves like a Bokmakierie, then…

He worried that scientists involved in genetic studies are lab-based and don't know the birds or their habitats. Rarer, now, must be the systems which produced MPSI, who described the emergence of the Black-tailed Cisticola *Cisticola melanurus*: he spent a week with the skins, on and off, leaving them to work on something else, then coming back to notice something new as he spent more and more time with them. 'On Monday they were just aberrant [*Cisticola*] *fulvicapilla* [Neddicky] ... by Friday, they were totally different and there was even sexual dimorphism.'

The genetic code can be determined by taking blood samples from live birds, which obviously cannot be handled for long periods, which rules out an intimate knowledge of their morphology. Genetic material can also be obtained from study skins, where museums staff (not necessarily involved in the study) take toe-pad scrapings to send to scientists in laboratories all over the world. Nowadays most do not supplement molecular findings with morphological or behavioural data. If they do refer to the study skins to check the patterns to test, MPSI was critical of a current tendency 'to open a drawer, look at [the series of study skins], say yes, they are all the same, and close it'. He emphasised that 'molecular biology needs to be related to the situation in the field', using a study of the African "brown buntings" (Olsson *et al*. 2013) to illustrate this problem. The molecular analysis suggests the Chimanimani isolate of the Cape Bunting *Emberiza capensis smithersii* is a good species, but, frustratingly, the other relevant taxa, including *plowesi* and *vincenti,* were not sampled despite there being ample material in a number of museums. The morphological and ecological patterns, to test against genetic evidence, were missed because his work (Irwin 1958, 2007b) was not referenced. 'The authors do not seem to have done their homework. [So] we still haven't answered the question of how many species [of African brown buntings] we might have!'

But MPSI recognised that many problems, like taxonomy of the saw-wing swallows *Psalidoprocne* spp., also remain unresolved because 'it is likely we don't have enough material'. He noted that the only way to find pattern in a widespread, polytypic species is to have a large series of skins (Irwin 1972). 'It seems a waste of time to go to a new place and not collect voucher specimens … of birds which are expected to show morphological variation.'

This is not the place to explore contemporary study skin collection – when to collect and when not to collect – but it is a debate MPSI believed has never been fully explored. One can't fault his intentions: we won't conserve Africa's bird diversity if we don't know it is there.

MPSI, the scrupulous

MPSI was a scrupulous student of African biodiversity. And he expected others to argue a case properly too. 'When someone synonymises, has he actually gone ... to look at [the study skins]?' For example, when the well-defined Okavango Delta subspecies *tenuirostris* of the Spectacled Weaver *Ploceus ocularis* was inexplicably culled from *Birds of Africa* and *Roberts* 7th edition, he went to Bulawayo to revisit the study skins and wrote a paper (Irwin 2007a) to 'rescue [the taxon] from undeserved obscurity'.

He noted that there are all sorts of situations where our taxonomic understanding is an 'ongoing, fluid situation', and railed against a tendency to lump as a way 'to shove problems under the carpet'. 'Someone merely sits at a desk and says 'I think they are conspecific ... I *think* ... and it becomes "fact".'

There were no sacred cows, as is evident in his letter to the editor of *Ostrich* in 1978, where he wrote: 'The appearance of the fourth edition of *Roberts' Birds of South Africa* [sic] has been an eagerly awaited event, but to many it will come as a great disappointment ... Having gone through the species accounts with some thoroughness ... it would seem that, with a few exceptions, much of what has been written on birds in southern Africa since the first major (and successful) revision in 1957, has been ignored ... The present revision is a major disaster and an affront to ornithology and ornithologists in southern Africa" (Irwin 1978a).

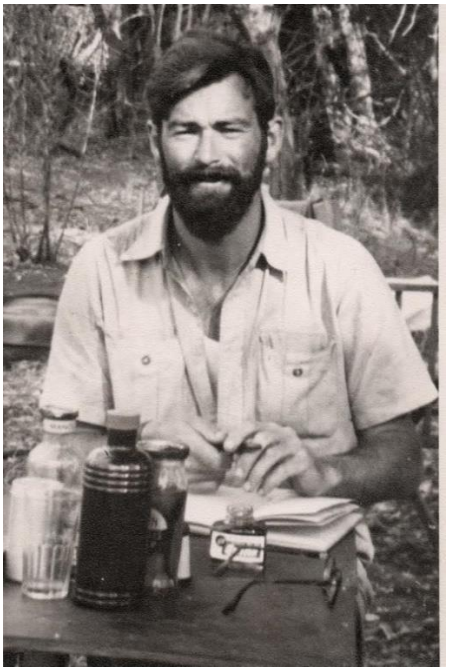
He was very upset by a biographical note published with factual errors. 'How did I become a Bombardier? ... I've never been a Bombardier ... I was [said to have been] conscripted into the army [for WWII]. In the last three hundred years, no member of the family has ever been conscripted. We were on the front-lines from the day war was declared ... It's an immaterial thing ... but it's *wrong.* It builds up a story which *doesn't exist.*'

MPSI – and the Bulawayo Museum – on the side-lines

MPSI's work, including the remarkable collection he built in Bulawayo, has been generally overlooked, notably in South Africa. This is partly due to a geographical mismatch between *Roberts' Birds of Southern Africa*, which covers the region south of the Zambezi and Kunene rivers, and MPSI's focus, which was the Zambezian Biome (of south-central Africa). State institutions like the museums reflected

ties within the Federation of Rhodesia and Nyasaland, and he had close working relationships with contemporaries like Constantine Benson and Charles White based elsewhere in the Federation. Zambia, Zimbabwe and Malawi form the core of the Zambezian Biome, and MPSI worked across it. In contrast to ornithology, botanical texts reflect these biogeographical and political relationships, with the *Flora Zambesiaca*, for example, covering most of the Zambezian Biome.

The production of southern African bird books has been dominated by the John Voelcker Bird Book Fund (JVBBF) and the '*Roberts'* franchise' and MPSI was never involved. In his comments on *Roberts IV* edition he concluded that 'The Trustees of the John Voelcker Bird Book Fund as sponsors of the work have been badly let down; yet they, too, must share some of the responsibility' (Irwin 1978b). 'In future, the task of revising [*Roberts' Birds*] ought to be placed under the jurisdiction of a Standing Committee of experts elected for that purpose (Irwin 1978a).



MPSI in the field, probably in the 1950s

I enquired about this when I interviewed him in 2014. He told me that Cecily Niven, who was a trustee of the JVBBF at the time, travelled to Bulawayo 'to smooth the waters.' (Niven was the daughter of Percy FitzPatrick; the library at the FitzPatrick Institute of African Ornithology at the University of Cape Town is named after her.). 'I made the point that the authors [of *Roberts IV*] were not actively participating in ornithological research ... and that led to their replacement ... [I never meant] to be a kingmaker...'

But, the JVBBF never set up an editorial committee of southern African experts and he wasn't asked to author species texts until *Roberts VII*, when he declined, saying he was "out of touch" (*in litt.* to Carl Vernon 2000). By then he was 75, so perhaps it was not an unreasonable excuse. But was it the whole story? After all, at the time, he was contributing to other regional monographs, writing species accounts for two volumes of the *Birds of Africa* series in 1997 and 2000. And his revision of sunbird systematics (Irwin 1999) formed the basis of the key sunbird monograph (Cheke & Mann 2001) and the treatments in *Birds of Africa* and *Handbook of the Birds of the World*. If he had been involved in *Roberts VII*, the authors wouldn't have missed key information in *Honeyguide*, which he had edited since *Roberts IV*. And the mistakes in the distribution maps, especially with respect to subspecies, which exposed a lack of understanding of the ecology and biogeography of south-central Africa, could have been avoided. For example, misconceptions regarding the distributions of the Wailing Cisticola subspecies *Cisticola lais mashona* and *C. l. oreobates* that were initiated in the *SABAP1 Atlas* were exacerbated in *Roberts VII* and compounded in Chittenden *et al.* (2012). Having revisited the series of study skins in the Bulawayo Museum, Irwin (2004) wrote a corrective. It's difficult to understand why Chittenden *et al.* (2012) followed Clancey (1974) rather than Irwin (2004) when faced with substantially different biogeographical patterns. These include two isolates, which could be good species (Irwin 2004) and, surely, they should have checked this for themselves? 'Study of [only] sections of the [available] material in isolation is a major source of misunderstanding' (Irwin 1972). And as MPSI noted in 2014 'For the last thirty years ... South African ornithology *sensu lato* [has operated] as if the 90,000 specimens in Bulawayo don't exist'.

That other Zimbabweans have had such an impact on southern African natural history – like the Coates Palgraves (and their tree monograph) – only highlights how MPSI sat at the outskirts of southern African ornithology. It's likely that part of the reason for this was his lack of tertiary education. He had long had to deal with the (very public) jibes of university academics, as is evident in the 1962 letter to *Ostrich* by J.M. Winterbottom, the first director of the FitzPatrick Institute. '[Mr] Irwin devotes 20 pages to arguing that *Batis molitor* and *B. soror* are two different species. He then prints a two-page appendix by Mr A.N. Rowan showing that the statistics on which he relied for part, at least, of his argument are invalid ... Was he aware of [the discrepancy]? If he was, he had no business to publish the paper at all; and if he was not, what was the point in asking a statistician to examine his figures without telling him what they meant?' (Winterbottom 1962).

There was certainly no sense in the 2014 interviews that he *felt* he had been overlooked. He even seemed to accept, then, that bird research centres in South Africa, Zimbabwe and elsewhere in Southern Africa simply operated in isolation – because that is the only way they could operate (logistically)? 'I never had any particular ambitions, except to put [misconceptions] right'. Except that it is clear from those 1978 letters that he *did* have ambitions – to sit on a *Roberts* editorial committee drawn from across southern Africa. The fire of those 1978 letters had mellowed in old age, and it seems he was happy, looking back, at what he *had* achieved rather than with what might have been.

This illustrates not only the uneasy relationship that developed in the 20th century between museum naturalists and university academics, but also how Victorian autodidactic scholarship was eclipsed by tertiary-educated academia. And it could explain MPSI's tendency for self-imposed exile in some circumstances. For example, Vernon *et al.* (in press) note that he never attended any of the Pan-African Ornithological Congresses. He also never participated in the large workshop of experts in the early 2000s that aimed to set the scene for conservation planning across the Zambezian Biome for the next decades (Byers 2001; Timberlake & Chidumayo 2001) – surely he was invited?

The influence of the Bulawayo Museum in southern African natural history is much more evident for other taxa. For example, although the mammal monograph was published at the Mammal Research Institute in Pretoria in 1983, it was based on the knowledge and experience gained while Reay Smithers was employed by the (then) National Museum of Rhodesia from 1947 to 1979. Richard Dean (2017) wrote: 'Although the Natural History Museum [of Zimbabwe] in Bulawayo has the largest collection of bird study skins in Africa...the logistics of getting the data [for his book on bird collectors in Southern Africa] were too difficult to overcome'. But if this is a valid excuse for why so much of the information stored in the collection in Bulawayo has never made it into regional monographs, it is only a very recent one. Consider, for example, that Kit Hustler, then of the Bulawayo Museum too – and with direct access to its store of distribution information – was also not invited to edit the SABAP1 atlases.

But, for Southern African ornithology – and African ecology generally – it seems like so many opportunities lost. Certainly, if one is seeking a more complete Truth of the birds of Southern Africa, one has to refer to Irwin (1981) as a primary source, and to the huge amount of text published in *Honeyguide* since then. Fundamental biogeographical patterns were also missed by the regional review workshop (Byers 2001, Timberlake & Chidumayo 2001) because MPSI wasn't there. A key emergent feature of miombo – likely *the* key feature with respect to the conservation of its biodiversity – is its

avifauna, and would the workshop have named the area of concern the "Miombo Ecoregion" – rather than, say, the Zambezian Ecoregion following White (1983), if MPSI had (re-) emphasised the fundamental differences between the plateau and valley avifaunas? I realise that is why I sought out Michael's discussions: because he talked about biogeographic patterns and processes which no-one else – including professional academics and conservation biologists from the universities and international NGOs – had even contemplated.



Reay Smithers and MPSI, builders of the ornithological collection at the Natural History Museum of Zimbabwe

For those concerned for the future of African ornithology, these are important considerations. How to reconcile museums and university academics? More importantly, how to reconcile professional academia and international NGOs with amateur scholarly birdwatchers who provide much of the distribution data on which conservation management relies? How can professional academics and NGOs inspire and lead the conservation of African bird diversity by communicating what now seems such a dry field (systematics) driven by computer algorithms rather than expert opinion based on decades of field experience of birds, their behaviour and habitats? With its wonderful store of resources, the Bulawayo Museum should be playing a key role in south-central and southern African ornithology, and African conservation biology more generally, so how can we ensure that it does?



MPSI collecting in Ngamo Pan with his trusty .410 shotgun (said to have once belonged to Admiral Lynes – the man who clarified cisticola taxonomy). Date unknown.

MPSI, the catalyst

MPSI was generous with ideas for as long as I knew him, late in his life when he was in his early seventies. Greg Davies, former Curator of Birds, Ditsong National Museum of Natural History, Pretoria, put it best: MPSI's unpublished observations in 1969 and his forty years of prompting others to investigate further acted as a 'catalyst' for the first records of the Mangrove Kingfisher *Halcyon senegaloides* nesting in arboreal termitaria (Davies *et al.* 2012). Such generosity is not always a feature of academia, where ideas are currency. But one only has to refer to Marshall (2012) to see how esteemed he was by colleagues as much for his generosity (and good conversation) as his scientific rigour and innovation. It was the idea that mattered to him, not who came up with it.

His collegiate approach was, from all accounts, a feature of the Bulawayo Museum and key to its growth and development. The era of Smithers, Irwin, Donald Broadley, Elliott Pinhey, and others, was a golden age of African natural history when the reference base of specimens for others to work with was being built up. Study skins were swapped with museums in Africa and elsewhere. The rapid growth in knowledge of the natural history of south-central Africa was popularised as authors and artists like Peter Steyn and Graeme Arnott worked with the skins and discussed patterns and processes with MPSI. The comprehensive, accurate field guides we have today could not have been produced without the study skins collected and curated by MPSI.

The museum was influential in fanning the flames of a popular natural history tradition in Zimbabwe. MPSI noted that prior to Reay Smithers' tenure as director, research was focused on more esoteric subjects and taxa. Smithers shifted its focus to the more charismatic vertebrates to broaden the appeal of the institution among the general public.

The Rhodesian Schools Exploration Society (RSES) expeditions were particularly important in this respect. Staff from the museums and the other great repository of Zambezian Biome material, the (then) Southern Rhodesia Government Herbarium in (then) Salisbury led groups of schoolboys aged 15 or older into the field to investigate and collect material on aspects of zoology, botany, archaeology, geology and so on. These expeditions contributed significantly to the collections of the museums and herbarium.

MPSI participated in many RSES-Matabeleland Branch expeditions such as Sentinel Ranch, Buffalo Bend, Malimbasimbi, Charama Plateau, Shashe, Middle Limpopo, Bikita, Chivi, Bukwa and Vashu Ranch, and mentored young adults on expeditions he never attended, inspiring many young minds. One of those boys who both preceded and succeeded him as Editor of *Honeyguide* wrote 'After this trip [Sentinel Ranch, 1960] I resolved to study zoology and become an ornithologist' (Marshall 2012).

That the museum was so successful – and inspired so many to take up natural sciences – was testament to the people, like MPSI, who made the Zimbabwean institutions like it, and the taxpayers and supporters who fund them.

MPSI, the epitome of amateur scholarly enthusiasm

Although MPSI made a career as a professional systematist, he remained a Victorian 'amateur' enthusiast at heart. It was the research that mattered, not the job. He made important contributions well after his (forced) early retirement from the museum, keeping up his rate of output almost to the end of his life. His first contribution was published in 1950 and he published something in all but three years (1951, 1982 and 2017) from then on. Amongst his final papers, written when he was in his nineties, were two that recognised that there are two miombo sunbird species (Irwin *et al*. 2014, Leonard *et al.* 2016).

With no tertiary education, he knew that *anyone* can contribute; there is still so much African natural history to discover and put on record. He liked nothing more than to welcome anyone and everyone to his study to chat about birds. He was a prolific correspondent: the letters he tapped out on his type-writer (into 2017) and sent to school-children, lawyers, farmers, housewives (used here as a historical term), businessmen, teachers, engineers, district commissioners and others, were an institution in themselves. He wasn't just a catalyst, he was a proselytiser, encouraging everyone to write up their observations.

As much as the remarkable skin collection in Bulawayo, his legacy is the role he played in *Honeyguide*, which is exceptional not only for its content, but also for its contributors. While MPSI was one of the fulcrums around which the system operated, and he ensured the highest standards, the thousands of pages of text published under his guidance were contributed almost entirely by amateur enthusiasts and are themselves a treasure-house of information on African birds. The Victorian spirit of amateur scholarly enthusiasm lives on in the pages of *Honeyguide*.

Birds and their habitats will only be conserved if they are valued by the societies in which they occur. So, popular natural history traditions are key to bird conservation. What greater expression of the love of birds than the penning of an article describing newly observed behaviour? MPSI knew that the systems which produced these stories (in print) were much bigger than him. But he showed us that all that was required to find these stories was to ask the right questions. The only way to do that is to know the literature and to get out into the *bundu* and watch birds. And spend time with the study skins.

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A.J. Cizek

Michael Irwin: *Honeyguide* Contributions, 2001-2016

This bibliography is a list of papers and articles published by Michael Irwin in *Honeyguide* and updates the bibliography he published in 2001 (Irwin, 2001. *Honeyguide* **47**: 213-228), along with some items from 2001 that were not included in that bibliography. I have no information on anything that he may have published elsewhere during these years.

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Some Comments on "Recent Reports/Field Observations" in *Honeyguide*

Brian Marshall

I recently decided to put all the records from the 'Recent Reports' and 'Field Observations' in *Honeyguide* into a spreadsheet. [I will be happy to provide a copy to anybody who would like one.] This proved to be a bigger task than I expected because these sections began in 1980 and have therefore been a feature of the journal for nearly 40 years. My objective was simply to make it easier to find citations of species without having to make a physical search through the journal itself. In the process of doing this I was, however, able to make some observations that may be of interest. I attempted to include every citation of every species in these sections, with the exception of some included by Tony Tree after his visit to wader sites in Western Australia (Tree 1996). These Australian species should probably have been described in a separate article since they are unlikely to occur in Zimbabwe and would certainly not have been 'recent reports' here.

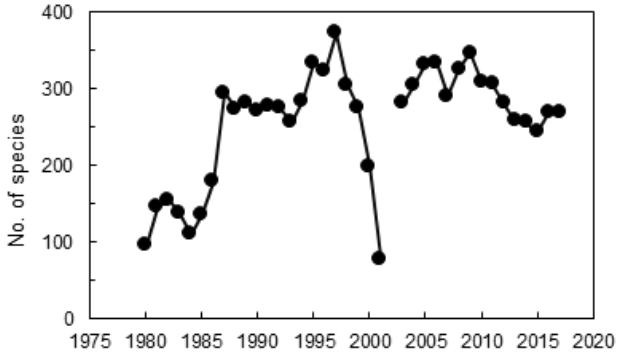


Figure 1. The number of species recorded each year in Recent Reports/Field Observations, 1980-2017. The dates are when the records were published, not necessarily when birds were seen.

The result was that a total of 659 species have been listed in these reports and, after a slow start, the number cited each year was generally between about 250 and 350 species (Figure 1). The numbers dropped in 2000 and 2001, and there were no reports in 2002 because this was a transitional period between the 'Recent Reports' prepared by Tony Tree, who had left the country, and the 'Field Observations' compiled by Colin Baker from 2003 onwards.

This species list included 367 non-passerines and 292 passerines (ratio = 1.3:1) which is close to the ratio of 1.2:1 given in Irwin (1981). This suggests a fairly even coverage but this was not the case since there were 11,470 citations of non-passerine species compared to only 5,421 passerine citations. This almost certainly reflects the fact that non-passerines are generally larger, more conspicuous, and easier to identify than passerines. Furthermore, the passerines include a larger number of 'difficult' groups such as the larks, pipits, cisticolas, and other warblers, which may deter observers who might not be confident in their ability to identify such birds and therefore never report them. This problem is evident in a frequency distribution of the citations of both groups (Figure 2). Here the proportion of passerine species cited from 1 to 10 times (55.8%) was significantly higher than that of non-passerines (30.0%).

The general list includes some ducks that probably escaped from captivity (e.g. Rosy-billed *Netta peposaca* and Red-crested Pochards *N. rufina*, and Tufted Duck *Aythya fuligula*) and some species that might be recorded in the country in future (e.g. Angola Swallow *Hirundo angolensis*). Almost every Zimbabwean species has been included, but some seem to have been overlooked, either because they are very common and generally ignored (e.g. Kurrichane Thrush *Turdus libonyana*) or unobtrusive (e.g. Little Sparrowhawk *Accipiter minullus*). Other common species are cited very sparingly; for example, the Malachite Kingfisher *Corythornis cristatus*, Yellow-fronted Tinkerbird *Pogoniulus chrysoconus*, Tropical Boubou *Laniarius major* and Common Waxbill *Estrilda astrild* were cited only once. Others are missing because their distributions only just reach Zimbabwe (e.g. Brown Firefinch *Lagonosticta nitidula*) or else they are vagrants that might not have been recorded for many years (e.g. Great Crested Grebe *Podiceps cristatus*). A rather surprising omission, considering how many records come from the Nyanga area, is the Cape Canary *Serinus canicollis*; has this species declined or is it just being overlooked?

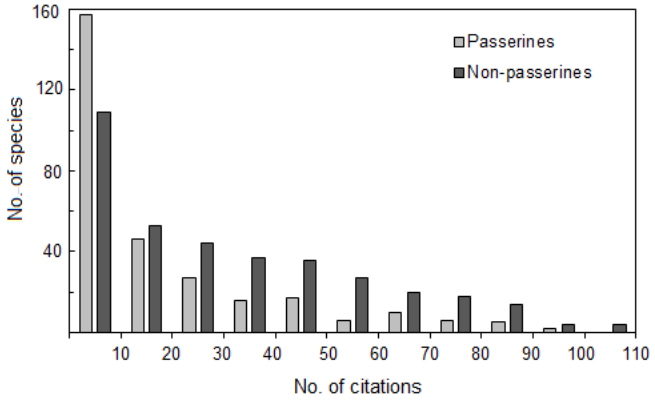


Figure 2. A frequency distribution of citations for passerine and non-passerine species in Recent Reports/Field Observations, 1980-2017. This figure refers to the number of times a species name occurs in the reports, not the number of observations for each species.

A comparison of the top 20 passerine and non-passerine species is also of interest (Table 1). The species that was cited most frequently was the Glossy Ibis while three other non-passerine species were cited over 100 times. Migrants were dominant in both groups because most of them were regularly cited in the 'arrivals' and 'departures' sections in the reports. Some of these most-cited species are not necessarily very common or widespread and have been included because sightings are notable and thus reported. Examples include the Cape Teal, Cape Shoveller, and Cuckoo Hawk among the non-passerines, Coppery Sunbird and Cabanis's Bunting among the passerines. Interestingly, the Western Violet-backed Sunbird *Anthreptes longuemarei* is the third most-cited sunbird, after the Coppery and Purple-banded, even though it is one of Zimbabwe's least familiar sunbird species. The Yellow-billed Kite would undoubtedly be higher on the list were it not for the fact that its sightings have been listed separately since 2011 (Baker 2011).

These reports are obviously influenced by the ability and interests of the observers. This can be illustrated by comparing citations for waders (family Scolopacidae) in the years when Tony Tree was producing Recent Reports with those in Colin Baker's Field Observations (Table 2).

The citation rate was rather higher in Tony Tree's time because of his intense personal interest in these birds, an interest not perhaps shared by subsequent observers. This is a pity because the major changes occurring in Arctic ecology might soon affect their breeding and reduce the numbers coming to Zimbabwe. Most people are aware of the plight of the Polar Bear but we know less about other species. In 2018 wild fires occurred within the Arctic Circle in Sweden for the first time ever – a grim portent of things to come. Populations of breeding waders affected by fire might not be able to recover and records from their non-breeding areas could help to understand what might be happening to them.

Table 1. The 20 most-cited non-passerine and passerine species, 1980-2017, with the total number of citations for each

Non-passerines		Passerines	
Glossy Ibis *Plegadis falcinellus*	110	Plum-coloured Starling *Cinnyricinclus leucogaster*	99
Abdim's Stork *Ciconia abdimii*	102	Red-backed Shrike *Lanius collurio*	94
Marabou Stork *Leptoptilos crumenifer*	102	European Swallow *Hirundo rustica*	87
Hottentot Teal *Anas hottentota*	101	Purple-banded Sunbird *Cinnyris bifasciatus*	87
Pied Avocet *Recurvirostra avosetta*	94	Paradise Flycatcher *Terpsiphone viridis*	84
Sacred Ibis *Threskiornis aethiopicus*	93	Pearl-breasted Swallow *Hirundo dimidiata*	81
Osprey *Pandion haliaetus*	91	Coppery Sunbird *Cinnyris cupreus*	78
Wood Sandpiper *Tringa glareola*	91	Black Cuckoo-shrike *Campephaga flava*	74
White Stork *Ciconia ciconia*	89	African Golden Oriole *Oriolus auratus*	73
Curlew Sandpiper *Calidris ferruginea*	88	Willow Warbler *Phylloscopus trochilus*	73
Yellow-billed Kite *Milvus aegyptiacus*	87	White-breasted Cuckoo-shrike *Coracina pectoralis*	72
Cape Teal *Anas capensis*	86	Capped Wheatear *Oenanthe pileata*	71
Fulvous Duck *Dendrocygna bicolor*	85	Cinnamon-breasted Bunting *Emberiza tahapisi*	70
European Bee-eater *Merops apiaster*	85	Lesser Grey Shrike *Lanius minor*	69
Black-winged Stilt *Himantopus himantopus*	84	Red-capped Lark *Calandrella cinerea*	67
Cuckoo Hawk *Aviceda cuculoides*	84	Eastern Saw-wing *Psalidoprocne orientalis*	65
Openbill *Anastomus lamelligerus*	83	Red-breasted Swallow *Cecropis semirufa*	64
Cape Shoveller *Anas smithii*	83	Cabanis's Bunting *Emberiza cabanisi*	64
Kittlitz's Plover *Charadrius pecuarius*	83	White-throated Swallow *Hirundo albigularis*	63
Rock Pratincole *Glareola nuchalis*	83	House Martin *Delichon urbica*	62

Table 2. Citation statistics for scolopacid waders in two time periods, 1980-1999 (Recent Reports) and 2003-2017 (Field Observations).

	1980-99	2003-17
No. of species	23	23
No. of citations	469	279
Citations per species	20.39	12.13
Citations per species per year	1.07	0.87

I have once or twice had complaints about 'Field Observations' which, it was claimed, were of little value being just an assemblage of random observations. This is true up to a point but because there are now so many observations – at least for some groups – it is possible to use the data from these reports to build up a picture of seasonality, range extensions, and so on. For instance, Tree (1998) used the data to investigate seasonality in the Glossy Ibis, while Irwin & Tree (1998) used them to investigate the movements and seasonality of the Marabou Stork. I have also found them very useful in assessing the status of the Slaty Egret *Egretta vinaceigula*, Collared Flycatcher *Ficedula albicollis*, two Godwit species (*Limosa limosa* and *L. lapponica*), Eleonora's Falcon *Falco eleanorae* and the Egyptian Vulture *Neophron percnopterus* in Zimbabwe (Marshall 2011a, 2011b, 2014, 2016, 2017).

My interest was further aroused by a comment in Tree (1992) that the Hadeda Ibis *Bostrychia hagedash* may be a seasonal migrant in the Zambezi valley below Kariba and I was able to use the reports to determine whether or not this is the case (Marshall *this issue*). Finally, David Ewbank (*this issue*) has used the data to find out if the arrival and departure dates of migratory species have changed. This is important because climate change is expected to affect migration patterns.

There are undoubtedly many more valuable insights that can be obtained from these reports and I would encourage readers to see for themselves what could be done. Many interesting comments have been made in their texts and readers would obtain useful information by reading through them. This would also give them some idea of what material might be appropriate for 'Field Observations'. However, if this data set is to continue as a valuable resource, we need members to send in their observations even if they are uncertain whether or not they will be of interest or importance.

Finally, I should also acknowledge the work done by Tony Tree and Colin Baker, in particular, for their efforts in collating and maintaining these records.

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The Role of the Ornithology Collection at the Natural History Museum, Bulawayo in the 21st century

The collection of bird specimens in the Natural History Museum is the largest in the southern hemisphere housing more than 93 000 specimens making it one of the most important ornithological collections in the world. The growth of this collection owes much to the efforts of Michael Irwin who began collecting specimens for the museum in 1951. He was appointed as Assistant Keeper of Vertebrates by Reay Smithers in 1959, and shortly afterwards became Keeper of Ornithology.

The main purpose of the collection was to determine the distribution and taxonomy of birds in the region at a time when this was poorly known. This can be seen, for example, in Priest's four-volume *Birds of Southern Rhodesia*, published from 1933-1936, which had a great deal of text but said very little about the distribution of bird species within the country. The collection was also important because there were no reliable field guides and it was not always possible to identify birds from Norman Lighton's plates in *Roberts* (first published in 1940). Photography was also more difficult, colour photographs were expensive, and only the most dedicated photographers were able to take pictures that could be used for identification purposes. Thus, the first checklist of the birds of this country (Smithers *et al*. 1957. *A checklist of the birds of Southern Rhodesia*. Rhodesian Ornithological Society, Salisbury) relied almost entirely on specimens in the museum.

Today, good field guides are available and digital photography has made it much easier for birdwatchers to take pictures that can be used for identification purposes and the need to refer to museum specimens has declined. The distribution of birds in Zimbabwe is now well-known, thanks to the work of the Natural History Museum, and conventional taxonomic studies based on morphology (which made up much of Irwin's work) is of much less importance nowadays. So what purpose does the collection serve in the 21st century? Its most important function is to provide a comprehensive historical dataset, which can be used by researchers in their investigations. Many use it to gather data on morphometry and the differentiation of subspecies or even new species; a recent example of this is the discovery that the Miombo Double-collared Sunbird *Cinnyris manoensis* could be separated into two species, *C. manoensis* (Eastern Miombo Sunbird) and *C. gertrudis* (Western Miombo Sunbird) (Irwin *et al*. 2014. *Honeyguide* **60**: 54-61).

The collection also tells us where and when certain specimens were collected. This is particularly important because the environment is rapidly changing, both globally and locally, and these studies reveal how much the distribution of birds has changed over time. Some species have decreased or even disappeared from places where they once occurred, while others are appearing for the first time in new localities.

Improvements in DNA technology have transformed our understanding of bird taxonomy. Museum collections, including the national collection in Bulawayo, provide the material for DNA investigations, reducing the need to collect fresh specimens, especially from species that may now be endangered. Photographers and artists have used the specimens to clarify identification features in, for instance, the new *Roberts' Field Guide*.

The collection also houses over 46 000 Nest Record Cards, which were used by Irwin to indicate breeding seasons in his book *The birds of Zimbabwe* (1981). It is widely expected, and there is already some evidence for it, that bird breeding will be affected by climate change and so the Nest Record Cards are an important source of historical data that will be needed to understanding its impacts. Researchers working on population studies will also be interested in the breeding records of birds. Irwin and his team of skinners worked tirelessly to put together this marvellous collection of study skins.

Kudzanai Dhliwayo, *Natural History Museum, Bulawayo.*

REQUEST FOR INFORMATION

The Chukar Partridge in Mvurwi

What is the status in Zimbabwe of the Chukar Partridge *Alectoris chukar*? They were introduced in at least three places, Nyanga in 1896, Mvurwi in 1969 and Imire, Marondera, in 1970. The result of these introductions is unknown and they may have come to naught. It is likely that the Chukar no longer occurs in Zimbabwe but still, no one knows for certain.

The missing piece in the puzzle is: what happened to the Chukar released in 1969 at Mvurwi by Mr. Gavin Langham. Does any reader know Mr. Langham, or his descendants, or know of a person who may have hunted gamebirds in the Mvurwi district? The known facts are that the first release of 110 mature Chukar was made in 1969, a further 115 Chukar were released in 1970 and they hoped to release 200-300 birds in 1971. Writing in the *Rhodesian Farmer* Langham said 'After two years we have got Chukor [*sic*] out in the wild and they appear to be holding their own… Today, January 13, 1971, 12 day-old Chukor chicks were seen with two parent birds.'

Thus, the question is: did any of these Chukar survive at Mvurwi and if so, did they thrive? Or are they now extinct? Also, what was the name of the farm where they were released? Anyone who can continue to add to the saga of the Chukar of Mvurwi is asked to contact Carl Vernon or the editor of *Honeyguide*.

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Honeyguide **64**: 14-15 (2018)

Further Observations on the Blue Swallow Population near Penhalonga

John Meikle

This update follows an earlier article (Meikle, 2010) on the Blue Swallow *Hirundo atrocaerulea* population at Mina Alumina just inside the Mozambique border north of Penhalonga (QDS 1832D3 Mutare). It is well known that the population of this bird is small and endangered, numbering less than 1500 pairs, with perhaps 620 birds in the eastern highlands of Zimbabwe (Stevens *et al*., 2015). An earlier estimate suggested that there were 280 pairs in Zimbabwe, mainly at Connemara, Nyanga National Park and the Kairesi area (Evans & Bouwman, 2010).

Migration

Evans & Bouwman (2010) suggest there are three main routes from their non-breeding grounds in East Africa to their breeding areas in southern Africa. The first is from the area around Lake Albert (DRC/Uganda) to the Upemba region in the DRC. The second is the western side of Lake Victoria (Uganda/Tanzania) directly south to South Africa, Zimbabwe/Mozambique and Malawi, while third is from the eastern side of Lake Victoria (Kenya) to southern Tanzania and Malawi. These authors suggested that Blue Swallows recorded outside their usual breeding grounds may have been on passage. Four such records were cited from Zimbabwe; Glendale Farm (1) Chipinge Uplands (2) and Borrowdale Farm (1).

I have some reservations about these conclusions and suggest more data are required to support this hypothesis, based on my own observations at Penhalonga going back 17 years. Arrival dates vary from 30 August to 7 September, but there is a slow build-up in numbers starting with 2-4 birds and rising to 10-14 birds within two months. Then there is a build-up to 70-80 birds in late October, thereafter settling to what I suggest is the resident population of 50-60 birds. The difference, I suggest, are birds in passage from further south (Chimanimani and possibly South Africa). Departures are more spread out than arrivals, being from 18 April to 3 May. Departures seem to occur on a weakening south-easterly airstream and in a series of waves, where numbers drop significantly, then build-up again for a second mass exodus leaving a diminishing number of stragglers behind. This variation can be illustrated by estimates of their numbers in early 2013, below:

15-26 March	40 birds, diminishing to zero
27 March – 1 April	None
2-16 April	18-35 birds
7-10 April	4-10 birds
11-13 April	None
14-20 April	3-4 birds
21 April – 2 May	None
3 May	4 birds, departing the same day.

The inference I draw from this is that the migration routes may follow the mountain chain from KwaZulu-Natal to Malawi, via Mpumulanga, Chimanimanis, Himalayas, Penhalonga and Nyanga, rather than a straight line from their breeding grounds. This supports the view that the two records from the Chipinge uplands in March and September were birds on passage (Irwin, 1981). The two records from Borrowdale (September) and Glendale (April) may have been on passage but had possibly been blown off course, or they were simply vagrants. The build-up and decline of the Penhalonga population, followed by a further build-up suggests that these may represent temporary feeding. This resident population may leave together but there appear to be influxes of migrants temporarily boosting the numbers.

Breeding

As mentioned in my previous article, breeding normally occurs in sinkholes or, preferably, antbear holes but these animals are extinct around Penhalonga. The swallows now rely almost totally on artificial prospecting holes, constructing their nests in the foot holes in the pits where, unfortunately, they are liable to collapse in heavy rain. Ian Little suggested the pits could be improved by digging a horizontal recess about 2 m down so that nests could be protected from heavy rain but this modification was ignored by the birds in the 2015/16 season. In 2016/17 a half completed nest was found on 20 September, showing that nest-building started soon after their arrival on 4 September. I noted only one instance of breeding in a porch of a house with hatching on 19 March and fledglings leaving the nest on 10 April, 22 days after hatching and departing on 28 April, 18 days after leaving the nest. There is evidence that successive broods can be raised in a single season, with nest-building beginning in early September and mud being collected as late as the last two weeks of December. The numbers of fledglings being fed by their parents have been observed as follows:

29 November 2009	2
23 December 2016	3
2 January 2017	3
20 January 2017	2
10 February 2017	2
27 March 2017	3

What puzzled me was how the adults feed their young fledglings because they appeared to approach the young on the wing and fly away or perch next to them but made no attempt to feed. However, I saw a fledgling sitting on a road, about 2 m away from me, fluttering its wings and waiting for food. I was able, even with my poor photographic skills, to prove that both adults feed their young while on the wing without landing.

A survey of nests in the 2014/15 season showed that there were only six active nests out of 20 potentially available sites. This seems rather low considering that there were an estimated 50-60 birds in the area and suggests that some birds did not breed despite suitable nesting sites being available. However, the population appears to be stable, which may be explained by two factors. The first is that up to three broods may be raised in a season (Maclean 1984). The other is that Blue Swallows are cooperative breeders, meaning that there may be more than two birds present at each active site (Evans & Bouwman 2010). Blue Swallows once occurred in areas such as the Vumba, where they have not been seen for years. This may be explained by the fact that once there are no longer any suitable breeding sites, the collective memory of how to return to that area is irrevocably lost (Ian Little, personal communication).

Behaviour prior to departure

The birds spend most of their time dispersed over the feeding area or feeding chicks but, for some reason, from December onwards they periodically come together to "socialize." This occurs around my office and they wheel around, sometimes perching on a fence and then taking off, calling all the time, with a "*pswep*, *pswep*" call. From February onwards, they begin to congregate on the asbestos roof, lying on their sides in the roof furrows, and occasionally preening and then taking off and returning once more. I have counted up to 40 birds doing this, and I have previously seen this behaviour on a dusty road. It looked as if they were anting, which was not so, and they now prefer the warm asbestos roof.

Threats to Blue Swallows

This species regarded as 'Vulnerable' by IUCN (2017) because its population may have decreased by >50% since the 1850s while its range in South Africa, and possibly elsewhere, could have contracted by about 70%. This has come about through rapid population growth, intensified agriculture, and afforestation in both its breeding and non-breeding areas (Evans and Bouwan 2010). In Zimbabwe, plantation forestry and uncontrolled aliens such as wattle and pine have covered much of its habitat, even in protected areas such as Nyanga National Park where about 40% of its area has been invaded by alien plants (Childes & Mundy 2001). Much of the montane grassland interspersed with Afromontane forest in the mist belt has been lost to these birds. Efforts by National Parks and the private sector to control alien vegetation are commendable, but more funding is urgently needed if the montane grasslands are to be preserved. The decline, and even extinction, of antbears has reduced the availability of suitable breeding sites and this may also be another critical threat to these swallows, but this could be alleviated by digging artificial holes. Fire is a necessary tool to manage these grasslands but it cannot be too frequent because it changes the composition of the vegetation and perhaps the availability of insects. The practice of winter burning to give cattle green grass in spring is detrimental, as is overgrazing, which occurs at Connemara, Nyangani and Kaeresi.

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SHORT COMMUNICATION

Another Egyptian Vulture in the Zambezi Valley

On 13 November 2018 an immature Egyptian Vulture *Neophron percnopterus* visited the vulture restaurant at the Rifa Educational Centre, Chirundu (see photograph). Very few other vultures – 16 White-backed *Pseudogyps africanus* and 6 Hooded *Necrocyrtes monachus* – appeared that day perhaps because the school party and staff had eaten most of the impala and only gave skin and bones to the birds. It spent a short time at the restaurant, taking a small piece of impala before taking flight, picking up a thermal and disappearing. Its wedge-shaped tail was clearly visible as it flew away.



Elspeth Baillie, *Chirundu*
Leslee Maasdorp, *Harare*

Honeyguide **64**: 16-17 (2018)

Arrival and Departure Times of Migrants in Zimbabwe, 1999/2015

D.A. Ewbank

Introduction

Many bird species breed in southern Africa, some as far south as the Cape Province, but winter north toward the equator or even as far north as Eurasia. Some other species migrate to higher latitudes to moult, not to breed, spending the rains in what are generally drier regions. Most such examples are ground-feeding birds of open grasslands. It is possible that the same populations of certain species breed twice in the year: in moist lower latitudes in the dry season, in drier higher latitudes in the rains.

Migration is here defined as regular movements in and out of Zimbabwe in a regular direction (Benson 1982). This includes both Eurasian and Afrotropical species, usually from further north, coming to Zimbabwe to breed. This is complicated by a few species like the White Stork *Ciconia ciconia*, Booted Eagle *Hieraaetus pennatus*, European Bee-eater *Merops apiaster* and House Martin *Delichon urbica* which are palaearctic migrants that have (sometimes small) breeding populations in southern Africa. Some Jacobin Cuckoos *Clamator jacobinus* breed in India and migrate into Africa but whether the latter, which are only distinguishable by size, reach Southern Africa is uncertain (Dowsett *et al.* 2008) and they are classified as Afrotropical migrants here. All of these birds move north in April and May except for the Capped Wheatear *Oenanthe pileate*, which heads south when it leaves Zimbabwe.

The only altitudinal migrant covered here is the Black Cuckoo-shrike *Campephaga flava* (Irwin 1981). This contribution does not consider inter-annual or area differences such as those for White and Abdim's Storks *C. abdimii*, which arrive in Mashonaland in November but do not reach the Bulawayo area for another month or six weeks (Irwin 1981). Some species overwinter and some of the waders have hardly left before they reappear, making one wonder if they really travel all the way to their breeding grounds in northern Eurasia.

The aim of this note is to summarize the data in the Arrivals and Departure column of Field Observations in *Honeyguide* (compiled by Colin Baker from 2003 to 2015). The data (629 dates for 68 species) have been extracted and a mean arrival and departure date calculated for species with at least five records of either arrival or departure, along with the first and last dates and the sample sizes. This yielded data for a total of 15 Palaearctic and 17 Afrotropical migrant species. The data for the kingfishers come from Ewbank (2016) and cover a longer period than the other species. It should be remembered, however, that some of these species such as the cuckoos are most readily detected by their calls but they cease calling some time before departure and their departure dates may have a wide margin of error.

Evidence has been presented elsewhere that Yellow-billed Kites arrived later and departed earlier in 1998-2010 compared to 1962-83 at Aisleby Farm, Bulawayo, which may be linked to the decline in breeding in Zimbabwe (Ewbank 2014). So, we have an opportunity to compare the dates given here with those in Irwin (1981). A difference of two weeks in the arrival or departure time was taken to show a real difference in the timing of migration.

Table 1. The arrival and departure dates of Palaearctic migrants in Zimbabwe. Data from Baker (2003-2015). Dates are given as day/month.

	Arrivals			Departures		
Species	N	Earliest	Average	N	Average	Latest
Steppe Buzzard *Buteo buteo*	7	04/10	19/10	7	17/03	04/04
Amur Falcon *Falco amurensis*	6	20/10	14/11	9	09/04	24/04
Eurasian Hobby *Falco subbuteo*	2	23/11	24/11	5	17/03	04/04
Wood Sandpiper *Tringa glareola*	6	23/07	03/08	8	02/05	31/05
Common Sandpiper *Actitis hypoleucos*	6	26/07	02/08	2	14/05	18/05
European Roller *Coracias garrulus*	1	-	16/11	5	28/03	23/04
European Bee-eater *Merops apiaster*	11	04/09	24/09	14	15/04	25/04
Barn Swallow *Hirundo rustica*	5	21/09	01/10	11	18/04	10/05
House Martin *Delichon urbicum*	6	04/10	13/10	6	15/04	07/05
Red-backed Shrike *Lanius collurio*	10	08/11	11/11	7	15/04	25/05
Willow Warbler *Phylloscopus trochilus*	10	17/09	28/09	10	08/04	02/05
Garden Warbler *Sylvia borin*	2	03/11	24/11	7	28/03	01/04
Great Reed Warbler *Acrocephalus arundinaceus*	3	16/11	07/12	7	20/03	04/04
Sedge Warbler *Acrocephalus schoenobaenus*	1	-	28/11	7	06/04	14/04
Spotted Flycatcher *Muscicapa striata*	3	20/10	24/10	11	29/03	26/04

Results and Discussion

Palaearctic migrants mostly arrive between August and December, although a few species occasionally arrive in July, and depart in April and May (Table 1). The earliest species to arrive and last to depart seem to be the waders although data are only available for two species, the Common and Wood Sandpipers. They tend to arrive in late July-early August and only depart in mid- to late-May. Afrotropical migrants usually arrive between September and November and depart in April and May (Table 2). One exception is the Yellow-billed Kite which arrives in August (July records are usually from the Zambezi Valley). The Capped Wheatear is a conspicuous exception arriving in June and departing in November. At the Manyame Lakes the White-throated and Red-breasted Swallows arrive earlier. The African Paradise Flycatcher leaves earlier, and Grey-headed Kingfishers, Red-breasted Swallows and Diederick Cuckoos leave later than elsewhere in Zimbabwe (Chiweshe 2013). Whether these represent real differences or an artefact of small sample sizes is a question for further study.

There were some notable differences between the migration patterns in Zimbabwe and those in Botswana and Zambia (Table 3). In Botswana several Palaearctic and Afrotropical species arrived later than in Zimbabwe, and the only species to arrive earlier was the Steppe Buzzard. This was not the case in Zambia where some species arrived earlier which was to be expected because of its geographical position to the north of both Botswana and Zimbabwe (Table 3). Puzzlingly, Amur Falcons and Abdim's Stork arrived earlier in Zimbabwe than Zambia. In both Botswana and Zambia, a total of eleven species (both Palaearctic and Afrotropical) left later than in

Zimbabwe, with only one Palaearctic species leaving earlier. This may reflect breeding seasonality and post-breeding movements. For example, the Grey-headed Kingfisher breeds in Zambia from September to November and then moves on to Botswana from December to March, without breeding there, and then move north in April (Skinner 1996). There is no evidence that this species carries out such a two-directional migration in Zimbabwe but this might be watched for.

Table 2. The arrival and departure dates of Afrotropical migrants in Zimbabwe. Data from Baker (2003-2015)

	Arrivals			Departures		
Species	**N**	Earliest	Average	N	Average	Latest
Abdim's Stork *Ciconia abdimii*	8	15/08	08/10	7	11/04	03/05
Wahlberg's Eagle *Hieraeetus wahlbergi*	6	14/08	21/08	9	05/04	27/04
Yellow-billed Kite *Milvus parasiticus*	11	29/07	08/08	5	14/03	23/03
African Cuckoo *Cuculus gularis*	10	05/09	06/10	4	17/04	27/04
Red-chested Cuckoo *Cuculus solitarius*	6	23/09	28/09	4	17/03	27/03
Levaillant's Cuckoo *Clamator levaillantii*	8	01/10	10/10	10	21/04	30/04
Jacobin Cuckoo *Clamator jacobinus*	1	-	16/11	9	07/04	25/04
Diederick Cuckoo *Chrysococcyx caprius*	6	03/10	15/10	10	02/04	18/05
White-rumped Swift *Apus caffer*	7	08/08	22/08	8	27/04	17/05
Grey-headed Kingfisher *Halcyon leucocephala*	13	15/09	28/09	15	25/04	31/05
Woodland Kingfisher *Halcyon senegalensis*	10	19/09	19/09	10	27/04	29/05
Pygmy Kingfisher *Ispidina picta*	18	22/09	09/10	10	02/04	21/04
Broad-billed Roller *Eurystomus glaucurus*	8	21/09	03/10	3	20/02	08/03
Black Cuckooshrike *Campephaga flava*	4	11/09	12/09	12	04/05	26/05
White-throated Swallow *Hirundo albigularis*	9	15/07	04/08	6	14/05	24/05
Red-breasted Swallow *Cecropis semirufa*	11	11/07	14/08	5	05/04	18/05
Greater Striped Swallow *Cecropis cucullata*	3	09/09	14/09	8	01/05	18/05
Capped Wheatear *Oenanthe pileata*	9	24/05	09/06	9	19/10	18/11
African Paradise Flycatcher *Terpsiphone viridis*	7	06/09	17/09	9	02/05	24/05
African Golden Oriole *Oriolus auratus*	7	08/09	19/09	6	11/05	28/05

Table 3. The number of Palaearctic and Afrotropical species arriving earlier or departing later in Botswana and Zambia than the same species in Zimbabwe. Data from Herremans (1994) and Dowsett *et al.* (2008).

		Arrivals		Departures	
		Earlier	Later	Earlier	Later
Botswana	Palaearctic	1	4	0	4
	Afrotropical	0	11	0	7
Zambia	Palaearctic	3	1	1	6
	Afrotropical	2	1	0	5

Some migration dates appear to have changed since those given in Irwin (1981). Four species, European Bee-eater, Striped Cuckoo, and Grey-headed and Woodland Kingfishers, now arrive earlier, while Adbim's Stork arrives later. Two species (Capped Wheatear and African Pygmy Kingfisher) depart earlier and eight species (Abdim's Stork, Amur Falcon, Eurasian Hobby, Wood and Common Sandpipers, European Bee-eater, White-throated Swallow and Woodland Kingfisher) depart later.

The changes in migration timing of fifteen species in South Africa were discussed by Bussière *et al.* (2015) including twelve species included in this study. They found the timing of migration changed in four species, Red-backed Shrike, Spotted Flycatcher, Common Sandpiper, and Diederick Cuckoo, showed changes in migration timing in their study. Of these, only the Common Sandpiper showed a change in the Zimbabwean study but they say it left earlier whereas my data shows it left later. In conclusion, it is becoming apparent that climate change is beginning to affect bird migration patterns (Crick 2004; Carey 2009; Charmentier & Gianapp 2014). Most of the data presently come from the northern hemisphere but it is important for birders in the south to continue monitoring the arrival and departure of migratory bird species.

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Seasonal and Diurnal Changes in Feeding Behaviour of Red-billed Teal and Red-knobbed Coot at Two Dams near Figtree

David Ewbank

Introduction

Birds must deal with environmental fluctuations over time and in Zimbabwe the most frequent of these is the year-to-year variation in rainfall. Strategies for dealing with such change include changes in behaviour (MacDonald *et al.* 1983), changes in the amount of time spent feeding (Ewbank 2018) or movement to or from suitable areas (Ewbank 2012). These movements are particularly pronounced among southern African waterbirds which move widely in search of suitable habitats, the size, location and permanence of which is determined by rainfall. Such movements have been documented in Zimbabwe at Lake Mutirikwe (Junor & Marshall 1987) and on small dams in the Figtree area (MacDonald *et al.* 1983). One way of assessing how suitable a habitat might be for a particular bird species is to determine what proportion of the day it spends feeding, since one would expect it to spend less time doing so when food is abundant or more readily available.

This paper reports observations on the feeding behaviour of Red-billed Teal *Anas erythrorhyncha* and Red-knobbed Coots *Fulica cristata* on two small dams in the Figtree area. The work was carried out from September 1977 to March 1978, during a period of highly variable rainfall; the average rainfall in Bulawayo (Goetz Observatory) was 718 mm in 1976-77, 1153 mm in 1977-78 and 512 mm in 1978-79.

Table 1. Characteristics of the two dams

	Cyrene New	Lonsdale
Date of construction	1960	1957
Capacity (m^3)	57 000	79 600
Area (ha)	3.0	6.7
Max. depth (m)	5.1	4.3
Mean depth (m)	1.9	1.2

Study area

This work was carried out on Lonsdale dam on the Matopos Research Station and the New Dam on Cyrene Mission, about 10 km and 5 km east of Figtree, respectively. Both dams were small and shallow (Table 1). These two dams did not dry up after the rains during the study period and both supported floating (pondweed *Potamogeton* sp.) and emergent vegetation (sedges *Cyperus* sp. and bulrushes *Typha* sp.).

Methods

The feeding behaviour of Red-billed Teal was investigated on 12 dates on New Dam, and five dates on Lonsdale Dam, and that of Red-knobbed Coot on 11 and five dates respectively, in 1977/79. The significance of the time of day was not appreciated: two New Dam records are recorded as early afternoon (1300 to 1500 hrs) while the others were assumed to be late afternoon (1500 to 1700 hrs). The activity patterns of the two species were determined at New Dam on one day in October 1977 by recording their activity at regular intervals during two-hour periods between 0700 and 1700 hrs (half an hour after sunrise and half an hour before sunset, respectively). Their activities included (a) feeding (using their bills, upturning or diving); (b) resting (no apparent activity, sleeping and scanning for predators); (c) aggression (only in coots) and (d) preening.

Feeding observations were also recorded at various times on both dams. The data were separated into the hot dry (September to December), hot wet (January to April) and cold dry (May to August) seasons for Red-billed Teal but only into the wet (November to April) and dry (May to October) seasons for Red-knobbed Coot. All aggressive incidents were recorded on New Dam from March 1978 to February 1979.

Results and Discussion

One or two pairs of Red-knobbed Coots were present on New Dam from 1974-79 and they bred on the dam from 1975 to 1978, with chicks appearing in the same week around 10 June in three out of four years; in the other year (1978) the brood appeared three months later. They departed in November-December in three out of five years. They do not breed on Lonsdale dam, apparently because its water levels fluctuate too much (MacDonald *et al.* 1983).

Red-billed Teal are shallow water feeders mainly using their bills for feeding. On New Dam, they used their bills for an average of 78% of observations, but this was significantly reduced to 24% in the hot dry season of 1978 (Table 2). During this season, they were feeding deeper, submerging their head for 28% of observations and upturning for 48%. On Lonsdale Dam, they tended to feed deeper, submerging the head and upturning for 40-50% of observations during the two hot dry seasons but it fed significantly shallower in the one hot wet season with 80% of feeding observations involving only their beaks. On the Kafue Flats Red-billed Teal fed deeper in the dry season (Douthwaite 1977) possibly because they were in deeper and more permanent water.

Table 2. Feeding behaviour of Red-billed Teal at various seasons on the two dams, 1977-78. N = number of observations; H-D = hot dry, H-W = hot wet and D-C = dry cold seasons. There were no data from Lonsdale Dam in the dry cold season 1978.

	New Dam				Lonsdale dam			
	H-D 1977	H-W 1978	D-C 1978	H-D 1978	H-D 1977	H-W 1978	D-C 1978	H-D 1978
N	625	316	99	246	144	150		50
Beak (%)	73.9	80.4	79.9	24.0	59.7	84.7		50.0
Head (%)	13.1	19.6	20.1	28.0	22.2	15.3		20.0
Upturn (%)	13.0			48.0	18.1			30.0

The diurnal activities of Red-billed Teal included resting (mean = 30%), preening and comfort (17%), and feeding (52%) and they fed mainly in the morning up to 1100 and again from 1300 onwards with a midday break (Table 3). In the morning, their feeding was mostly shallow, dabbling with their beaks and submerging their heads. From 1300 onwards, however, they were feeding deeper, mostly submerging their heads and upturning. Typically, they fed for some time along the edges of the dam and then relaxed and preened for a while in deeper water. In contrast, at Barberspan they fed mostly after 1300 hrs between May and September in a low-rainfall year (Dean 1977). These birds fed for only 25% of the day (compared to > 50% on Lonsdale and New dams) because they departed at night to feed on dropped maize in nearby fields (Skead 1977). They spent less time feeding than the other three species studied at Barberspan, and they also fed by wading in the shallows, which the Zimbabwean birds did not.

Table 3. Activity patterns (%) of Red-billed Teal on New Dam, Cyrene, October 1977. The feeding activity is further broken down into feeding with the beak at the surface, submerging the head or upturning.

				Feeding		
Time	Resting	Comfort	Feeding	Beak	Head	Upturn
0700-0900	15.4	14.2	70.4	33.3	31.5	5.6
0900-1100	53.4	11.0	35.6	22.6	12.1	0.8
1100-1300	31.7	42.9	25.4	3.6	4.7	17.1
1300-1500	15.3	13.3	71.4	7.1	44.6	19.8
1500-1700	35.8	5.7	58.5	18.3	24.6	9.4
Mean	30.3	17.4	52.3	14.9	26.6	11.0
N	193	120	375			

Both of these studies showed that Red-billed Teal feed at different depths during the course of a day. The deepest feeding in the Zimbabwean birds and all four species at Barberspan occurred at midday and in the afternoon. At New Dam the period of least feeding activity coincided with the maximum depth of feeding but this was not the case at Barberspan. It is possible that the angle of the sun, at different times of day and at different latitudes, may lead to changes to visibility conditions because of reflection. The main food items at Barberspan were ostracods, chironomid larvae, and adult corixids (Mitchell 1983) and the depth at which the ducks fed may have been determined by the movements of some of these animals or the location of plants and other organisms during the day (Skead 1977). Mitchell's study combines data for the whole year and does not discuss seasonal changes in diet, but in Zimbabwe it shifted towards plant materials in the dry season (Woodall 1979).

The coot beak differs from those of ducks in that it has a shearing edge and so it uses its bill in a different way. This is reflected in its diet, which consists mainly of the stems and roots of aquatic plants, as well as seeds and aquatic invertebrates (Hockey *et al*. 2005). There was little seasonal difference in the feeding behaviour of Red-knobbed Coots on the two dams (Table 4) but it fed at greater depths on Lonsdale Dam. The duration of 14 dives on New Dam ranged from 4-16 seconds.

Table 4. Feeding behaviour of the Red-knobbed Coot on the two dams in the wet and dry season, 1977-78. N = number of observations.

	New Dam		Lonsdale Dam	
	Wet	Dry	Wet	Dry
N	343	245	149	122
Beak (%)	83.4	82.4	70.5	74.6
Head (%)	9.9	10.6	19.5	18.9
Upturn (%)	2.6	3.7		4.9
Dive (%)	4.1	3.3	10.0	1.6

Table 5. Activity patterns (%) of Red-knobbed Coots on New Dam, Cyrene, October 1977. The feeding activity is further broken down into feeding with the beak at the surface, submerging the head, upturning or diving. Aggr. = aggressive behaviour.

					Feeding			
Time	Resting	Comfort	Aggr.	Feeding	Beak	Head	Upturn	Dive
07-0900	15.8	16.8		67.4	63.3	4.0		
09-1100	30	5.8		64.2	61.6	2.6		
11-1300	24.1	5.9		68.1	61.4	3.4	1.7	1.7
13-1500	10.4	14.2	5.6	69.8	65.4	2.1	1.2	1.2
15-1700	9.9	8.1	1.8	80.2	73.0	4.0		3.2
Mean	18.04	10.16	3.7	69.9	65.1	3.1	0.6	1.1
N	101	54	10	383				

Coots spent most (70%) of the day feeding, followed by comfort activities (20%) and resting (10%) with a little aggression in the afternoon (Table 5). They spend more time feeding than do the Red-billed Teals, which may reflect differences in the quality of their food. They rest mostly between 0900 and 1300 hrs and preen most in the early morning, and there is no difference in the depth at which they feed during the course of a day. Coots on New Dam usually lay eggs in May while further south at Rondevlei (Western Cape, South Africa) their breeding season is in October/November (Banks 1980). Thus, the month in the Rondevlei study most directly comparable to New Dam would be February. The Zimbabwean birds spent 70% of the day feeding while those in the Cape fed for only 45-55% of time depending on the time of day with more in the afternoon in September 1979. This was during the breeding season when food may have been abundant but they may have to spend more time feeding in order to provide for their chicks.

Coots were very aggressive towards other birds, with attacks on other coots peaking in October to December and against Red-billed Teal and White-faced Ducks *Dendrocygna viduata* peaking in April. These ducks were kept away from open water at this time.

The different behaviour patterns of coots and Red-billed Teal suggest that they feed on different foods, although both species are said to be omnivorous. The Red-billed Teal feeds on grain, the seeds, fruit, roots and stems of aquatic plants, as well as insects, aquatic molluscs, crustaceans, worms and tadpoles (del Hoyo *et al*. 1992; Hockey *et al*., 2005). The Red-knobbed Coot feeds predominantly on the shoots, fruits and seeds of submerged or floating aquatic plants, filamentous and macroscopic algae and grass, as well as molluscs, crustaceans, insects and occasionally carrion (del Hoyo *et al*. 1996; Hockey *et al*. 2005). Competition between the two species is likely to be reduced by differences in their bills, with coots mostly feeding on the surface and the teal feeding in rather deeper water (Tables 3 and 5).

Coots spend more time foraging in poor-quality habitats (Varo & Amat 2008) suggesting that the quality of New Dam is lower than it is in Barberspan and Rondevlei. However, the differences between the species may also be accounted for by the fact that Red-billed Teal forage at night at Barberspan (Skead 1977) and perhaps at New Dam as well. This behaviour has apparently not been recorded in coots.

The habitat fluctuations that occur both during and between years because of variations in rainfall, mean that aquatic birds in Matabeleland need to be ecologically adaptable, and their degree of adaptability may control their local abundance. The Red-billed Teal is flexible in its feeding methods and can thus utilise a wide range of wetlands while the coot does not vary its feeding behaviour and is therefore restricted to fewer wetland areas.

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On the Aquatic Avifauna of Artificial Impoundments in the Matobo Area

D.A. Ewbank

Introduction

This paper summarises information on the aquatic avifauna of the Matobo area derived from censuses, field cards, nest record cards and the literature. Estimates are available for the average number of the 24 most important species on impoundments in the northern Matobo district during the wet (November to April) and dry seasons (May to October) as well as the number of breeding pairs present in the area. The aim of this paper is to list these species and the dams they utilise, and to indicate which species breed in the area and try to define the habitats they occupy. Other species are covered in checklists currently in preparation.

Study area

The study area lies to the south of the watershed between the Limpopo and Zambezi river systems in the northern part of the Matobo District. Naturally occurring aquatic habitats are vleis and rivers, most of which only flow during the summer wet season. The first dam constructed in Zimbabwe was the Matopos Dam (1898) located in the study area, about 20 km south of Bulawayo. Dam-building in the area peaked between 1945 and 1970, with some 26 dams being constructed, which now support a diverse population of waterbirds. The avifauna of the Matobo area has been listed by Mouritz (1915), Vernon (1967) and Donnelly (1985) but the only papers dealing specifically with waterbirds are MacDonald *et al.* (1983) and Ewbank (2012a).

The area covered by this account extends over *c*.1500 km^2 and includes the Matobo National Park as well as the Khami Railway (20°17'S, 28°26'E) and Umgululu Dams (20°22'S, 28°19'E) and some dams on the Matopos Research Station, Cyrene and Vreigevicht Farms (Table 1). The mean annual rainfall is between 590 and 650 mm and rainfall is seasonal with approximately 93% falling between the months of November and April. Rainfall is highly variable with annual totals (July to June) having a coefficient of variability of 36% (Dept. of Meteorological Services 1977). The altitude ranges from 1420 m on the watershed in the Cyrene/Matopos Research Station area to 1200 m at Mtsheleli Dam in the southeast.

Table 1. The dams surveyed during this investigation, their dates of construction, capacity, area and maximum depth, and the number of counts and field cards available for each. The symbol * denotes dams located in areas with soils derived from metamorphic rocks, all the others are in granite areas.

System	Dam	Date	Capacity (m^3 x 10^3)	Area (ha)	Depth (m)	Waterfowl counts	Field cards
Limpopo	Matopos*	1902	2432	121	18.3	48	35
	Mpopoma	1950	2159	63	11.9	59	66
	Mtsheleli	1956	1909	43	11.9	92	45
	Toghwana	1955	561	15	11.1	59	28
	Three Sisters	1966	500	86	10.1	0	20
	Maleme	1950	272	8	11.1	38	62
	Chintampa	1950	191	9	11.1	53	13
	Nswatugi	1950	91	5	6.1	61	17
	Lonsdale*	1957	80	7	4.3	0	60
	Sandy Spruit	1943	45	3	5.0	0	13
	Clarke's	1942			2.0	0	15
Zambezi	Umlugulu	1953	2000	56	10.7	0	26
	Khami Railway*	1916	1492	60	7.4	0	24
	Cyrene New*	1960	57	3	5.1	0	58
	Cyrene*	1936	30	3	3.0	0	45
Total						410	527

Predators in these dams include the Clawless Otter *Aonyx capensis* and the Nile Monitor *Varanus niloticus*, which both feed largely on crabs. The otter has been recorded chasing White-faced Ducks *Dendrocygna viduata* and Red-billed Teal *Anas erythrorhyncha* on Lonsdale (MacDonald *et al.* 1983) while monitor droppings from Umgululu contained feathers of a young Little Grebe *Tachybaptus ruficollis* (Irwin, personal communication). The Fish Eagle *Haliaeetus vocifer* breeds in the Matobo National Park and although known to prey on waterbirds there is no evidence that they do so in the Matobo Park where they have only been seen to take fish. An African Hawk Eagle *Hieraaetus spilogaster* was seen taking a Cattle Egret *Bubulcus ibis* in the park but there are no other records of raptors taking waterbirds in the study area. Nile Crocodiles *Crocodylus niloticus* are present on Mpopoma and Chintampa Dams (Broadley& Wilson 2010) and Maleme Dam (Ian MacDonald, personal communication) but they have not been observed taking waterbirds, although they might certainly do so.

Nineteen species of fish have been recorded in the National Park (Minshull, personal communication) but not all of them occur in each dam. Only the straightfin barb *Barbus paludinosus* was present in the Cyrene dams and there were no fish in Lonsdale dam. Largemouth bass *Micropterus salmoides* have been introduced into a number of these dams and a Black Crake *Zapornia flavirostra* was eaten by one at Mpopoma Dam (Levey 1965). Elsewhere, these fish have been found to take juvenile Black Crakes, African Jacana *Actophilornis africana*, Red-billed Teal ducklings and a newly hatched Cattle Egret (Couto & Nealon 2002) and they may be significant predators of aquatic birds.

Methods

Data were obtained from 937 censuses that included all waterbirds except for the Scolopacidae and Sandplovers *Charadrius* spp. that were excluded for lack of data. Data were also obtained from the Wildfowl Survey carried out by the Department of National Parks and Wildlife Management (410 censuses), and 527 field cards submitted to the Field Card System of BirdLife Zimbabwe (BLZ). Censuses on Lonsdale and the Cyrene Dams were often conducted weekly or more frequently (MacDonald *et al.* 1983) but only the count closest to the 15th of the month was used in these calculations. The Wildfowl Survey only included members of the Anatidae and may therefore have underestimated the numbers of other species. The average number of birds on each impoundment was calculated separately for

the wet (November to April) and dry (May to October) seasons, with the total population being the sum of these values for each season.

Table 2. The average number of birds found on the 15 dams, and the number of dams on which each was found, in the wet and dry seasons, 1972-76.

	No. of birds		No. of dams	
	Wet	Dry	Wet	Dry
Little Grebe	68	162	12	12
White-breasted Cormorant	4	1	3	1
Reed Cormorant	7	0	4	0
African Darter	1	3	1	1
Grey Heron	3	3	3	3
Great White Heron	2	3	2	3
Cattle Egret	125	39	6	5
Hamerkop	5	3	3	3
Egyptian Goose	6	0	4	0
White-faced Duck	16	43	6	6
Red-billed Teal	164	130	11	11
Black Duck	11	16	3	7
Southern Pochard	3	3	1	2
White-backed Duck	44	17	5	5
Pygmy Goose	2	2	1	1
Knob-billed Duck	8	10	3	3
Red-knobbed Coot	215	90	10	5
Common Moorhen	4	4	3	3
Black Crake	2	3	2	2
Grey Crowned Crane	2	3	1	2
African Jacana	16	10	9	5
Wattled Lapwing	23	20	9	13
Blacksmith Lapwing	17	14	7	6
Pied Kingfisher	8	6	7	6
Total	756	585		

Results

The mean population of the 25 most numerous species on the 15 impoundments was 756 (24 species) and 586 (22 species) in the wet and dry seasons respectively in 1972/76 (Table 2). In both seasons four species, the Little Grebe, Cattle Egret *Bubulcus ibis*, Red-billed Teal and Red-knobbed Coot *Fulica cristata*, made up >70% of the population with the Red-billed Teal and Red-knobbed Coot being the most numerous in both seasons.

Comments on individual species follow below:

Little Grebe. The most widespread aquatic bird, only absent from three smaller dams. There was a significant dry season influx when the average number of birds was nearly 1.5 times greater than in the wet season. Sometimes in large flocks, up to 300 on Khami Railway Dam, with a mean of 150 in August- January but only 35 in the rest of the year in 1976/78 but not in 1985/90.

White-breasted Cormorant *Phalacrocorax lucidus*. Only on the largest dams (>50 ha) such as Three Sisters, Umgululu and Khami Railway Dams. Numbers always low but they were most frequent in the wet season. Breeding was reported in some years from Mpopoma Dam, nesting in a tree standing in water.

Reed Cormorant *Microcarbo africanus*. Only present in the wet season in small numbers on four dams. They perched on an emergent tree in New Dam but left after the tree collapsed in the 1980s. The only record from Cyrene Dam was at the highest recorded water level in the 1970s when the water reached the surrounding Acacia woodland. They were seen to be eating platannas (*Xenopus laevis*) and small barbs.

African Darter *Anhinga rufa*. Present in small numbers, slightly higher in the dry season, on Umgululu and Khami Railway Dam in the wet and dry seasons respectively.

Grey Heron *Ardea cinerea*. An erratic wanderer seldom staying longer than a week in any one locality and usually solitary, occurring only on Maleme, Cyrene and New Dams.

Great White Egret *Ardea alba*. Vagrant, most regularly seen on Lonsdale and in most wet seasons at Umgululu. Most dry season sightings were from Matopos and Three Sisters.

Cattle Egret. A regular nomad in the area in all months except June. Significantly more numerous in the wet season with the average value being >3 times greater than in the dry season. Most records are from October to March. A few large flocks (sometimes thousands of birds on passage) were seen in August.

Hamerkop *Scopus umbretta*. Recorded in small numbers but regular only on Lonsdale and New Dams. Present on Mpopoma in the dry season and Matopos Dam in the wet season. Nests were seen at Mpopoma and in the Matopos Research Station/Cyrene area.

Egyptian Goose *Alopochen aegyptiaca*. Present in small numbers in the wet season only on dams with an area >15 ha; bred on Mpopoma, Mtsheleli, Toghwana and Umgululu.

White-faced Duck *Dendrocygna viduata*. Significantly more numerous (2.7 times) in the dry season, this species was present on New Dam in August/September 1973 (when Lonsdale was dry) but not again in those months in 1974/78. They then congregated on Lonsdale before dispersing to New and Cyrene dams where they bred in January.

Red-billed Teal. Regular on most dams in the area with breeding recorded from half of them. The largest concentration was 350 birds from Three Sisters Dam in late 1975.

Black Duck *Anas sparsa*. Regular on Mtsheleli and Matopos Dams with dry season records from Mpopoma, Chintampa and Nswatugi Dams in the 1970s but not in the fewer records available in the 1980s. They were always present on Clarke's Dam in the 1950s and 1960s (Brian Marshall, personal communication). The rivers in the Matobo area are too small to support these ducks.

Southern Pochard *Netta erythrophthalma*. Present in very small numbers, mostly on Lonsdale where present for 33 out of 35 months (less frequent in August/October). They were present on New Dam, usually from November-May in 1975/78 and in small numbers on Three Sisters in late 1975 and 1976.

White-backed Duck *Thalassornis leuconotus*. Regular on three dams in high rainfall years, e.g., at Mtsheleli in 1963, 1968, 1972 and in 1975, Sandy Spruit in 1967 (23 and 27 in September and November) while there were 150 birds on Three Sisters in late 1975 and 50 in late 1976. It bred on Lonsdale in 1978 after the completion of a five-year counting program (MacDonald *et al* 1983.). It bred on Mesilume Dam in 1963 (Bradford 1963) but was not recorded there again until 1989.

Pygmy Goose *Nettapus auratus*. Regular; a pair was recorded breeding on Mtsheleli Dam, which has water lilies. May also occur on other dams as a vagrant; a pair was seen on Mesilume Dam in December 2011 when the dam was extensively covered by water lilies indicating the importance of this plant to this bird (Brian Marshall, personal communication).

Knob-billed Duck *Sarkidiornis melanotos*. Only regular on Mtsheleli (peaking in early 1973 and 1975) and Matopos dams (peak 36 birds in June/July 1972) with largest numbers in January/July.

Red-knobbed Coot. Regular on five small dams with beds of aquatic plants (*Typha* sp., and *Potamageton* sp.) but most numerous in the wet season (2.4 times more than in the dry season). It can only breed on dams with stable water levels and departs when water levels fall. On New Dam a pair bred each year from 1974-1979 with chicks appearing around June 10 every year (1975-1977) but two months later in 1978. They moved away in November-December in three years out of five. A mean of 180 were present on Khami Railway Dam from September-January and 50 in March-August but they were only seen once in five visits from1961-1964. It appeared on a number of previously unutilised dams in 1975-76 including Nswatugi (where it bred),

Umgululu, Matopos, Three Sisters and Cyrene Dam in April where it browsed on *Cyperus* inflorescences. It was regular on Lonsdale but never bred due to water level fluctuations.

Grey Crowned Crane *Balearica pavonica.* First recorded from the Matopos area in May 1949 and 26 were present on Khami Railway Dam in June 1964 (Vernon 1967). Numbers were much smaller in the 1970 and 1980s and the dates of records from Lonsdale (Macdonald *et al*. 1983) and Cyrene Dams in 1974-76, some 8 km to the south, do not overlap and were presumably the same birds. Single records exist from a number of other dams including New Dam some 3 km east of Cyrene Dam, where it was absent from 1974-1979 and it was first recorded there in August 1986. It was recorded breeding on an island in Lonsdale Dam from December 1972 and January 1974, and in tall weeds on Sandy Spruit in February 1988, but all these attempts failed.

African Jacana. Present in both seasons on Mpopoma, Khami Railway, Umgululu and Cyrene as well as Maleme, Lonsdale, Sandy Spruit, Matopos and Three Sisters in the wet season. They probably require water lilies for breeding and so might only do so when these plants are present.

Wattled Lapwing *Vanellus senegallus*. Regular on Mpopoma, Toghwana, Lonsdale, Khami Railway, and Umgululu Dams, with dry season records from Cyrene, New, Maleme and wet season records from Chintampa and Sandy Spruit Dams. The two lapwings are usually separated by water levels with the Blacksmith being present at lower water levels and the Wattled when they were higher. For example, Wattled Lapwings were only recorded on Cyrene Dam in October 1978 when it was at its highest level and water reached the surrounding woodlands (Ewbank 2012b).

Blacksmith Lapwing *Vanellus armatus*. Regular on Lonsdale, Matopos, Three Sisters, Umgululu, Cyrene and New dams with wet season records from Mpopoma Dam.

Common Moorhen *Gallinula chloropus.* Regular in small numbers; bred on New Dam and (in the few records available) on Mesilume and Nswatugi. All these localities had emergent beds of bulrushes (*Typha* sp.).

Black Crake. Appeared after two consecutive seasons of high rainfall, 1968-69 and in Nov 1975 but in small numbers. It bred on New Dam as well as Mtsheleli, Umgululu and Sandy Spruit.

Pied Kingfisher *Ceryle rudis*. These appear regularly on five larger and deeper dams, with more of them in dry years and they have been recorded breeding.

Table 3. The mean number of birds and the number of species on each dam in wet and dry seasons in the 1970s. Dominant vegetation types are indicated by *Ny = Nymphaea* and *Pt = Potamogeton.* The symbol * indicates dams situated on soils derived from greenstones, all others are on granite.

	No. birds		No. species	
	Wet	Dry	Wet	Dry
Matopos (*Pt*)*	79	38	14	11
Mpopoma	9	14	11	9
Mtsheleli (*Ny*)	14	12	11	6
Toghwana	14	23	4	4
Three Sisters	137	104	11	20
Maleme	4	2	5	2
Chintampa	9	1	2	1
Nswatugi (*Pt*)	21	26	8	7
Lonsdale (*Pt*)*	88	70	17	11
Sandy Spruit	43	12	7	6
Clarke's	11	11	2	2
Umgululu	37	27	13	9
Khami R'way (*Pt*)*	245	198	11	9
Cyrene New (*Pt*)*	38	31	8	10
Cyrene*	7	15	4	7

The four dams with the largest number of birds (>70%) in the both the dry and wet seasons were Khami Railway (33%), Three Sisters (18%), Lonsdale (12%) and Matopos (8%) (Table 3). Those with the fewest birds (<2%) were Mpopoma, Maleme, Chintampa, Clarke's and Cyrene. The number of species followed a similar pattern, but with some differences. The dams with the greatest average number (>10) of species in both seasons were Three Sisters (20.5), Lonsdale (14.0), Matopos (12.5), Umgululu (11.0) and Khami Railway (10.0) while the two with the lowest number were Chintampa (1.5) and Clarke's (2.0). With the exception of Three Sisters, the dams with the largest number of birds all had extensive beds of floating or submerged vegetation.

Discussion

Two of the four dams (Khami Railway and Three Sisters) with the greatest number of birds were both large dams, and shallower than the other large dams. Of the other two, Matopos would be one of the deeper dams when full, but this has seldom occurred during its history, while Lonsdale was the smallest and shallowest of the four. Deeper dams tend to have fewer birds because many species require shallows for feeding. Another possible factor is that the catchment areas of these four dams consist of metamorphic greenstones, and the water that drains them is richer in nutrients than those that drain granite (Williams 1970). Consequently, these dams are likely to be more productive than those in the national park. The presence or absence of aquatic plants also influences bird diversity with floating vegetation and *Typha* being the more important than reeds *Phragmites* sp. and sedges *Cyperus* sp. but none of these vegetation types were as important as floating or submerged plants (*Nymphaea* or *Potamogeton* spp.).

The presence and growth of these plants and changes in water level are linked to rainfall (Ewbank 2012a) and many fewer birds present in the dry years of the 1980s. Three Sisters dam, for example, was dry towards the end of the dry season in several years at this time and the reduced numbers of waterbirds number at this and the Khami Railway Dam accounts for most of the decreased numbers recorded in 1988 compared to 1976 (Ewbank 2012a).

In the dry years when water levels fall, there tend to be more waterbirds on the two deepest dams (Maleme and Mesilume). For example, on Mesilume in 1965 there were five field cards that list 18 species including Hamerkop, Black Duck, African Jacana and Common Moorhen that were present. Pygmy Geese were present in September 1972, August 1974 and November 1982 (Webb 1983). The number of ducks or geese were insignificant (mean <0.5 birds) in 41 wildfowl counts in the 1970s. White-backed Ducks were recorded breeding there in August 1963 (Bradford 1963) but they were not seen again until 1989. At Mpopoma Dam, an average of two Pygmy Geese was present in five counts in 1960 and they were recorded there again in August 1963, September 1972, September 1974 and October 1975. Lesser Jacanas *Microparra capensis* were present on New Dam in November-December 1976 and African Jacanas in November-December 1977.

Twenty of the 24 species show some variation in abundance in relation the wet or dry seasons, with 12 being more numerous in the wet season and eight in the dry season. However, these differences may not be significant in all cases because of the relatively small numbers of birds involved. Only 11 species had average numbers of 10 or more in any season and seven of these were more numerous in the wet season. They included the most abundant species, the Cattle Egret (220% difference), Red-billed Teal (30%) and Red-knobbed Coot (140%), while the numbers of White-backed Ducks (160%) and African Jacanas (60%) were also significantly higher in the wet season. The seasonal differences in Wattled and Blacksmith Lapwing numbers (20% in each) were less significant. In this case, the aquatic feeders (ducks and coot) were probably attracted by the availability of food in the water while the jacana may have been attracted by aquatic vegetation. The terrestrial and edge feeders (Cattle Egret and lapwings) would have utilised insects and small animals in the wetland vegetation around the dams. The four species that were more abundant in the dry season included the Little Grebe (140% difference), White-faced Duck (170%), Black Duck (50%) and Knob-billed Duck (30%). These species all feed in the water and were

probably driven to these dams as other water sources dried up after the rains.

Three species (White-breasted Cormorant, Cattle Egret, Black Duck) seemed to prefer large dams while four species (Reed Cormorant, Red-billed Teal, White-faced Duck, Common Moorhen) apparently preferred small ones. Two species (Crowned Crane and Southern Pochard) were mostly restricted to Lonsdale Dam: the former used an island nest site on that dam. Little Grebes and coots had a dry season refuge at Khami Railway Dam in the 1970s but most species show an erratic if regular pattern of occurrence closely linked to the water depth, water levels and the plants present on the individual impoundments.

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Fork-tailed Drongo eating a Red-billed Firefinch

The last issue of *Honeyguide* included a short note on a Fork-tailed Drongo *Dicrurus adsimilis* preying upon a Red-billed Firefinch *Lagonosticta senegala* (Rockingham-Gill, 2017. *Honeyguide* **63**: 79-80). We did not have an adequate photograph to include with that note but David has since sent one that shows the unfortunate waxbill being eaten by the drongo.

Photo: © David Rockingham-Gill

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Should we Accept Molecular Data Uncritically? The Case of two African Nightjar Species

Brian Marshall

Introduction

The basic unit of biology is the species and the system of naming species, still used today, is based on the work of Carl Linnaeus (1707-1778). The binomial system that he developed gave each species a name that consisted of a noun (the genus) and an adjective (the species). For example, he placed the three common swallows of western Europe into a single genus *Hirundo*, calling them *H. rustica* (= 'country swallow'), *H. urbica* (= 'town swallow') and *H. riparia* (= 'river swallow'). Later workers realised that this was not an entirely satisfactory arrangement and these species are now placed in separate genera; *Hirundo rustica* (Barn Swallow), *Delichon urbica* (House Martin) and *Riparia riparia* (Sand Martin). This was justified by anatomical and behavioural differences with *Hirundo* being applied to the 'typical' swallows while *Delichon* is separated by having a feathered tarsus and feet and a rather different nest, and *Riparia* is mostly brown and nests colonially in burrows.

Advances in molecular biology have transformed our understanding of relationships between birds at the ordinal, familial, generic and specific levels. While this is to be welcomed, even to those of us who first became interested in birds back in the 1950s, some of these conclusions should not be accepted uncritically.

What constitutes a genus?

While biologists have worked hard to find a universal biological definition of the 'species', no such definition is available for the genus. As a result, generic names vary quite widely as different workers use different criteria. For example, the 18 species of swallow found in southern Africa were placed into 14 genera by Roberts (1940), eight by McLachlan & Liversidge (1957), four by Maclean (1984) and eight by Hockey *et al*. (2005).

This indicates how problematic genera can be and much depends on what criteria are used to define them. Further problems arise because genera serve two somewhat incompatible purposes. On the one hand, they are used to group together similar species that are assumed to have a common ancestor and can be differentiated from other groups with different but related ancestors. On the other hand, they are also used to highlight differences between species, or groups of species, and this can create difficulties when it comes to naming genera and allocating species to them.

Genera have traditionally been described on the basis of morphology. Sometimes this is quite easy, for example, the two African quail genera are separated as follows:

Coturnix, wings long and pointed, first primary almost as long as the second; tail less than half the length of the wing, 10-12 tail feathers; *Excalfactoria*, wing more rounded, first primary about equal to the sixth; tail very short, 8 tail feathers (Stark & Sclater 1906).

This conventional taxonomic approach can work well when there are clear and consistent morphological differences between species or groups of species. It becomes more difficult, however, when families are morphologically uniform, and here colour variation and behaviour patterns become important (Mayr & Bond 1943). A good example of this is the Ruff (*Philomachus pugnax*) in which non-breeding males and females are almost indistinguishable from waders in the genus *Tringa.* The morphological differences between the two genera are insignificant but it is the extraordinary breeding plumage and behaviour of the male Ruff that places it in its own genus. When breeding, the male develops a 'ruff' of feathers varying in colour around its neck. They congregate in assemblies known as *leks*, where they display to compete with other males and attract females. While leks are known in other bird species none of the other scolopacid waders display in this manner.

Assigning a species to a genus can be quite difficult. For example, cisticolas and prinias tend to look similar when seen in museum cabinets, but they have been separated on various characters including the number of tail feathers, i.e. 12 in *Cisticola* and 10 in *Prinia*. Benson (1946) described Roberts's Warbler of the Eastern Highlands as *Prinia robertsi*, even though it seemed to have only eight tail feathers. It is now known that this species does in fact have 10 tail feathers (Hanmer & Irwin 2009) but this does not make it a prinia. Its behaviour, call and social structure are quite unlike those of the prinias and it is now placed in its own genus, *Oreophilais*. Molecular studies show that it seems to be more closely related to eremomelas and camaropteras (Olsson *et al*. 2013), so assigning it to its own genus seems to have been the correct decision.

There is inevitably a degree of subjectivity here and how one allocates species to a genus depends on whether or not one thinks the differences between them might be significant. However, even if such differences seem trivial genera can still be described in terms of morphology and behaviour. Consequently, they can at least be understood and, importantly, checked by anyone with a basic knowledge of avian anatomy or behaviour.

Molecular investigations produce dendrograms (essentially family trees) that indicate relationships between species and give a time sequence indicating when they diverged from ancestral forms. Generic relationships are then inferred from these dendrograms but, in the end, these also involve a degree of subjectivity. One of the major problems is that papers on molecular taxonomy are largely incomprehensible to the layman and even to scientists without specialist training. Thus, in contrast to conventional taxonomy, it is impossible for anyone without access to specialised laboratory facilities to check the generic status of any species. It is also impossible to formally describe a genus in molecular terms, in the same way that one can describe it in morphological or behavioural characteristics.

The Nightjar problem

The nightjars (family Caprimulgidae) are a relatively uniform group and most species are difficult to separate in the field. The nomenclature of African nightjars has been relatively stable for many years with all but two species being placed in the genus *Caprimulgus*. These two are generally placed in the genus *Macrodipteryx* because breeding males have elongated primary feathers. In the Pennant-winged Nightjar *M. vexillarius* several primary feathers are elongated, with the ninth primary becoming a long streamer (or pennant) that may be up to three times the length of the bird. The Standard-winged Nightjar *M. longipennis* also has an elongated primary, but in this case the shaft is bare for perhaps two-thirds of its length with the remaining vane forming a large 'flag' at the tip.

Recent investigations into nightjar phylogeny based on molecular characteristics (Larsen *et al.* 2007; Han *et al*. 2010) have changed the classification of nightjars. The true nightjars (i.e. excluding frogmouths, potoos and oilbirds) have been assigned to three major groups. The basal group seems to be the eared nightjars (*Eurostomius* spp.) of Australia and southeast Asia. The New World nightjars have been sub-divided further, into three sub-groups with a considerable reduction in the number of genera. Finally, the nightjars of Africa and Eurasia are all grouped into the genus *Caprimulgus*, with the species formerly placed in *Macrodipteryx* having been subsumed into that genus (Figure 1). This was justified by the fact that the *Macrodipteryx* nightjars are well embedded into the *Caprimulgus* group and, at least from a molecular point of view, there was no reason to support their placement in a separate genus.

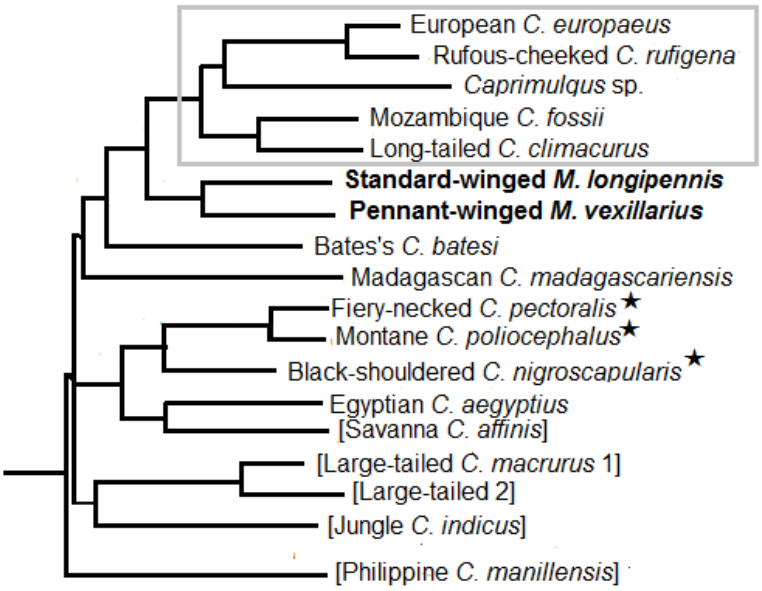


Figure 1. A simplified dendrogram of some Old World nightjars. Asian species are enclosed in square brackets; the Egyptian Nightjar occurs in both Africa and Asia. The symbol ★ indicates 'whistling' species, while those in the grey box are 'churring' species. Modified from Han *et al*. (2010).

International ornithological bodies wasted no time in accepting this change, and these two species are now listed as *Caprimulgus vexillarius* and *C. longipennis* in lists prepared by the IOC and BirdLife International, and the online version of *Handbook of birds of the world* (HBW Alive: https://www.hbw.com/). BirdLife South Africa has also accepted this change and the Pennant-winged Nightjar is included with *Caprimulgus* in their most recent check list. But should this change have been accepted so quickly?

It is not clear how the dendrogram in Figure 1 was drawn up but there seems to be no reason why it could not be rearranged by inverting the upper group of species (Figure 2). This inversion does not change the basic pattern of the dendrogram in that the relative lengths of the branches (which indicate when the species diverged) remain unchanged. However, this rearrangement shows more clearly that the two *Macrodipteryx* nightjars diverged fairly early from the general group of 'churring' species, which supports the idea that they could be treated as a distinctive outlying group.

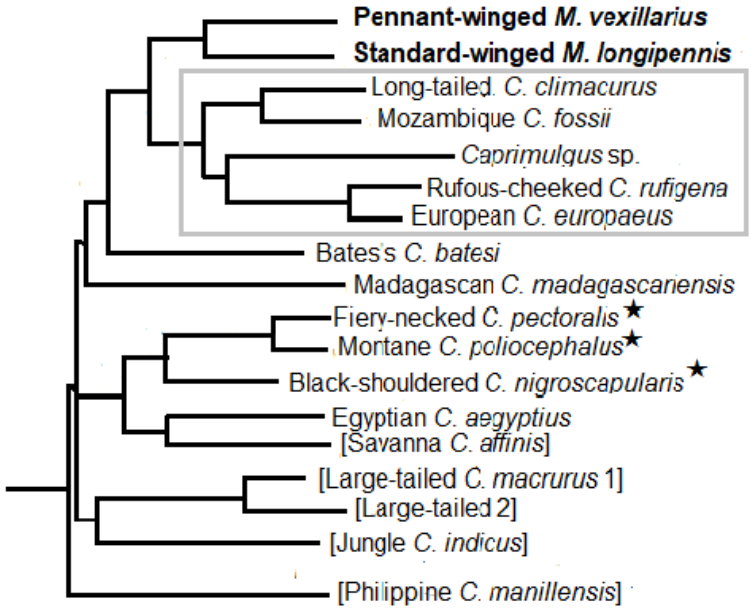


Figure 2. The nightjar dendrogram with the upper group of species inverted. Symbols and box the same as in Figure 1.

Han *et al*. (2010) argued that maintaining *Macrodipteryx* as a separate genus would require the erection of at least six other genera within the [Old World] clade, with little guarantee of monophyly for most of them. It is difficult to understand this argument because every genus is, by definition, monophyletic, i.e. descended from a single common ancestor. The problem here is defining where this common ancestor occurs on the dendrogram. There are several different possibilities, so which one should be used? The answer obviously depends on how one defines a genus. If it were necessary to have six genera to understand relationships between species in the *Caprimulgus* clade, then why not? Both dendrograms suggest that it might be possible to discern at least four, and possibly more, major groupings in the Old World nightjars and one might argue that lumping them all into a single genus is unjustified.

The first divergence isolated the Philippine Nightjar from the others. The next three occurred around the same time and broadly include some Asian species, the African 'whistling' species with melodic whistling calls, and the African 'churring' nightjars that make long, drawn-out calls sometimes changing in pitch, which have been likened to motors (sometimes changing gear). There are some

divergent forms, which do not fit easily into these categories, such as Bates's and Madagascan Nightjars, which do not 'churr', or the Egyptian and Savanna Nightjars, which do not whistle.

Mayr and Bond's view that colour variations and behaviour patterns become important in uniform groups of species is certainly valid in relation to the nightjars. Most Old World nightjars have distinctive calls and it is usually easier to identify them from their calls than by sightings. This suggests that calling is a major component of their territorial and mating behaviour and may have been an important driver of their evolution. The general pattern in all of these nightjars seem to be similar, i.e. calling from a distinctive perch and in many cases flashing white patches around their throats. The differences among these species may not be sufficiently distinct to warrant separate genera, but this is not the case for the *Macrodipteryx* species.

The behaviour of these birds differs significantly from the other nightjar species. Both *vexillarius* and *longipennis* have elaborate courtship display flights in which the elongated primary feathers play a major role (Cheke & Walsh 2000; Jackson 2004). This can be seen clearly in an excellent video, available on YouTube, of *longipennis* displaying where the male can be seen displaying his 'flags' by holding the primaries upright, at 90° from the wing (http://dermotbreen.blogspot.com/2016/05/).

Conclusion

If we assume that behaviour is a major driver of evolutionary change then it is reasonable to conclude that significant differences in behaviour between species should be recognised in their generic placement. Placing *vexillarius* and *longipennis* in the genus *Caprimulgus* masks these behavioural differences and deprives the generic name of one of its functions, i.e. to indicate different evolutionary pathways and outcomes.

Han *et al*. (2010) also recommended that the monotypic North American genus *Phalaenoptilus* (i.e. with only one species *P. nuttalli*) should be merged, along with some other genera, into the genus *Hydropsalis*. As with *Macrodipteryx* spp., *P. nuttalli* was previously placed into its own genus because of its unique behaviour – it is the only bird species known to hibernate. Surely this, too, represents an evolutionary divergence that deserves recognition.

In their paper on swallows Mayr & Bond (1943) wrote 'It is surprising to the museum ornithologist how extraordinarily alike different species of swallows are in the skin [when they] differ in the field conspicuously by their voices, nest and flight movements. This morphological similarity is probably the reason why current check-lists group together species and genera which the field naturalist would not consider as closely related.' This comment could equally apply to molecular biologists, and highlights the need to understand the birds in life as living creatures, and not just as assemblages of DNA.

Acknowledgement

This article is dedicated to Michael Irwin who was also concerned that molecular taxonomy was becoming separated from the behaviour and ecology of the living bird.

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The editorial team regrets to announce the deaths of two members of BirdLife Zimbabwe who have been regular contributors to *Honeyguide*.

Ferdy Couto, who died in October 2017, contributed 28 articles, usually together with his wife Tracy.

Tony Tree, who died in December 2018 was one of the towering figures in Zimbabwean ornithology, contributing no fewer than 164 items to *Honeyguide* between 1959 (when it was the *Bulletin of the Rhodesian Ornithological Society*) and 2015. He also published many papers in other journals and contributed to major books about southern African birds. We hope to publish a fuller account of his life and work in a forthcoming issue of *Honeyguide*.

A Brief Summary of Recent Cape Crow Sightings in Zimbabwe

Innes Louw

After reading the article on a sighting of a singleton Cape Crow *Corvus capensis* in Bulawayo (Tarr, 2016. *Honeyguide* **62**: 118-119) and the subsequent Editorial comments I thought it would be useful to record sightings of this species from various birders (in particular special thanks to Ian Riddell) in addition to a handful of my own. Cape Crows are definitely around but their numbers have certainly declined over the years.

My first encounter with these birds was in my childhood, when we lived on a farm in the Greystones farming district (1958-1965). We occasionally drove through the then Gwatemba African Purchase area located between the Greystones farming area and Bannockburn/Mberewenga. We probably travelled through this area two to three times a year and were often rewarded with a sighting on most occasions. It was many years later (1985-2003) before I came across Cape Crows again.

This time I often saw them on my travels near the Vungu River along the Gweru-Shangani highway. Observant motorists would have noticed them there as well. Eventually there was only one, and finally the remaining bird disappeared. They made their nest on telephone poles but in my many years of travel I never did I see any juveniles (i.e. more than two birds), so it is difficult to know if they had any breeding success.

Next, it was only in 2008-2018 that I began noticing an occasional Cape Crow around Harare. My own sightings include birds seen at approximately 10 km west of Norton, a flock of six east of Bally Vaughan Park en-route to Shamva feeding on the ground in a maize field, and a number of separate but sporadic sightings around Harare with the latest being when I was travelling through Hatfield from the airport in early January 2018. The presence of these birds around Harare seems, at best, to be very intermittent or irregular.

A brief summary of the observations (Table 1) indicate that they were often seen at Plumtree School in the 1960s and a flock of about 25 was seen in the Beatrice farming area in the early 1990s. It is well known that this species sometimes occurs in small flocks, as noted in the Harare District by Marshall (1900. *Ibis* 7th series **6**: 221-270) although not as frequently as the Pied Crow *C. albus* (Priest 1936). An analysis of field card records, almost 40 years ago, confirmed that Cape Crows were largely restricted to the central plateau of Zimbabwe. They were most frequent in the eastern highlands and Mashonaland with their frequency decreasing to the west and south of Gweru (Marshall, 1979. *Honeyguide* No. 98: 5-14). The SABAP atlas project confirmed this basic distribution but indicated a much wider spread, at low frequencies, in the south and west of the country (see: http://sabap2.adu.org.za/docs/sabap1/547.pdf).

Some comments from observers suggest that the Cape Crow has declined. For example, Gordon Putterill notes that it was common some 40 years ago but has not been seen at Bally Vaughan for the past 17 years, Jamin Bews saw them around Harare approximately five years ago, while Ken Dixon saw them on the Sherwood Golf Course (Harare) in the past. There has evidently been a significant decline in the population of Cape Crows over the past 50 years and that even small flocks no longer occur consistently around Zimbabwe (groups of 4-6 birds have been seen only occasionally). The remaining population is rather fragmented and its survival and breeding success is threatened. In view of this, may we assume that the overall number in Zimbabwe is declining? It would be interesting to establish the size of the population in Zimbabwe: as little as a hundred, two-five hundred or more? Since this species continues to decline in numbers it should perhaps be listed as one of our 'Species of Special Concern.'

Innes Louw, *Harare*. ✉ Innes.louw@ames.co.zw

Table 1. Some recent sightings of the Cape Crow in Zimbabwe

	Location	Number	Source
1960-70s	Somabhula farming area	2	DT
1960-65	Plumtree school (fairly regular sightings)	small flocks	KvL
1960-65	Gwatemba small scale farming area	2	IL
1950-60s	Mayfield farm (Pied Crows only started to arrive after 1980)	4 breeding pairs	DP
1985-2003	Vungu/ Somabhula area	2	IL
1990s	Beatrice farming area	*c*. 25	RD
1992	Brondesbury Park Hotel area	1 (juv)	GD
1998 Mar.	Teviotdale/Warthog Rd, Borrowdale Harare	1	IR
2000 Jan.	Link/Groombridge Rds, Harare	2	IR
Jun.	Sable/Impala Rd, Borrowdale, Harare	1	IR
Jul.	Chiweshe Communal Land	2	IR
Aug.	Old Hararians Sports Club, Harare	2	IR
Aug.	Marlborough vlei, Harare	2	IR
Nov.	Marlborough vlei, Harare	2	IR
Nov.	Marlborough vlei, Harare	5	IR
Dec.	Sherwood Golf Club, Harare	1	IR
2001 Feb.	Armadale Rd, Borrowdale, Harare	2	IR
Feb.	Impala Rd, Borrowdale, Harare	3	IR
Mar.	The Chase, Mt Pleasant, Harare	1	IR
2002 Jan.	Gwebi River, Harare-Chinhoyi road	2	IR
Feb.	Mukuvisi Woodlands	1	IR
Feb.	Avondale Jnr School, Harare (+ Pied Crows)	1 + (6)	IR
Feb.	Wilson Drive, Greengrove, Harare	1	IR
Mar.	Twin Rivers School, Harare (+ Pied Crows)	1 + (15)	IR
Mar.	Belgravia sports field, Harare	1	IR
Apr.	Chiota Communal Land	5	IR

	Location	Number	Source
Apr.	Nyamagaya farm, Nyanga	2	IR
Jun.	Marlborough vlei, Harare	2	IR
Dec.	Teviotdale/Whitwell Rd, Borrowdale, Harare	4	IR
2002	Arundel Office Park/Arundel School, Harare (now gone)	2	DP
2003 Jan.	Whitwell/Alpes Rd, Borrowdale, Harare	2	IR
Jun.	Alpes/Chatsworth Rd, Borrowdale, Harare	1	IR
Jul.	Chikupo cave, Chinamora Communal Land	1	IR
Aug.	Borrowdale Rd, South of Dandaro, Harare	1	IR
Aug.	University grounds, Upper East Rd, Harare	1	IR
Aug.	Haka Park, Harare	2	IR
Aug.	Masembura, 3.2 km west of Chikupo cave	1	IR
Sep.	Mukuvisi Woodlands, Harare	2	BLZ
Oct.	Chiota Pan, Seke Communal Land	2	IR
Nov.	Haka Park, Harare	2	IR
2004 Jan.	Whitwell/Fox Rd Borrowdale, Harare	3	IR
Mar.	Crowborough Cattle Pens, Harare	1	IR
Apr.	Piers Rd, Borrowdale, Harare	1	IR
May	Vungu River (Gweru-Shangani road)	2	IR
Jun.	Mukuvisi Woodlands, Harare	2	IR
Jun.	Ewanrigg Botanical Garden	2	BLZ
Jul.	Borrowdale Rd, near Dandaro, Harare	1	IR
2005 May	Sua Pan, Botswana	3	IR
May	Cleveland dam, Harare	3	IR
2006 Mar.	Teviotdale/Whitwell Rd, Borrowdale, Harare	1	IR
Apr.	Greendale Sports Club, Harare	1	IL
2007 Jun.	Dieppe Rd, Graniteside Quarry, Harare	1	IR
2010	Headlands/Rusape	small flocks	GD
2010 Mar.	Greendale Sports club	1	IL
Sep.	Shamva Rd, past Bally Vaughan	6	IL
2012 Jan.	1km NW of Warburton (Nyazura-Odzi area)	5	IR
2012 Jul.	Flying over Art farm, Harare	2	CB (H-G)
2012 Aug.	McDonalds farm, Ruwa	2	IR
2013 Jun.	55 km from Harare, past Norton	1	IL
2013	Borrowdale race track (breeding pair)	2	
2014 May	Mukuvisi Woodlands, Harare	2	IR
May	Flying over Mukuvisi, chased by Pied crows	2	IR
Jun.	Chinamora Communal Land	2	CB/JB
Various	Gateway School, Harare	2	TC.
2014 Sep.	Winchendon Rd, Borrowdale, Harare	1	CB/JB
Oct.	Harare industrial sites (with Pied Crows)	1	IL
Dec.	Connemara, top dam	2	LS
2015 May	David Livingstone school, Harare (with Pied Crows)	1	IL
	Near Harare agricultural showgrounds	1	IL
	Gateway School, Harare	Various	TC
	Borrowdale race course	2	
2016 Nov.	Gwanda	2	EM
Nov.	Lomagundi Road, Harare	1	DK
2017 Apr.	Flying over Art farm, Harare	1	
Sep.	Shangani area	2	G
Nov.	Umkauzane Pan, Hwange (close to Dopi Pan)	1	SC
Nov.	Coventry Rd /Rotten Row, Harare	1	TC
Dec.	Glenara Ave, Harare	1	TW
Dec.	Lobenvale cattle paddocks, Borrowdale	2	KvL
Dec.	Mvurwi	2	JB
	Hillside golf course, Mutare	1	GD
2018 Jan.	Hatfield, Harare	1	IL
Feb.	Old Mazowe road, Mt. Hampden	3	

Observers: Darryl Tiran (DT); Evans Mabiza (EM); Karl van Laeren (KvL); Doug Kok (DK); Innes Louw (IL); Lowden Stoole (LS); Duncan Parkes (DP); Steve Chinhoi (SC); Richard Dennison (RD); Tracy Couto (TC); Gary Douglas (GD); Tony Wood (TW); Ian Riddell (IR); BirdLife outing (BLZ); Colin & Julia Baker, including Field Observations in *Honeyguide* (CB/JB).

Honeyguide **64**: 30-32 (2018)

A Survey of Nesting White-backed Vultures in the Hwange National Park

Josephine Mundava, Fadzai Matsvimbo, Tendai Wachi & Peter Mundy

The Hwange National Park is one of Zimbabwe's 20 Important Bird and Biodiversity Areas. It has long been identified as an important breeding area for the White-backed Vulture *Pseudogyps africanus*, with breeding records from throughout the park. Several previous vulture surveys have been carried out in the park but there are no recent data on the nesting of White-backed Vultures. In 2012 and 2014 vulture nesting sites were identified in the Main Camp and Sinamatella areas of the national park by driving along the roads. Nests were mapped and the height and species of nesting trees were determined. In most of the areas surveyed, nests were within 2 km of the road and the birds generally preferred tall trees and avoided teak woodlands, the dominant vegetation type in most of the park. A total of 56 nests were counted during the 2014 survey, representing the minimum number of pairs in the park, since some parts could not be surveyed. This is a relatively low density compared to other areas in southern Africa but the reasons for this have not been fully identified. Future monitoring of the population would be improved by the use of aerial surveys in combination with ground searches.

Introduction

Hwange National Park, located in north-western Zimbabwe is the country's largest park and has been nominated as an Important Bird and Biodiversity Area (Childes & Mundy 1998). The yardstick for its nomination was that it served as 'an important refuge for seven raptor species.' A checklist for the park (Hustler 1986) includes seven species of vulture of which three are 'critically endangered' (IUCN 2018). One of these is the White-backed Vulture *Pseudogyps africanus*, which was previously recorded as a breeding resident throughout the park (Hustler 1986).

The historical occurrence of vultures in the park is well documented, with the first warden stating that the White-backed Vulture occurred in 'all areas', with nests being recorded at Ngamo (Main Camp area) in the southeast (Davison 1963). This was corroborated by Steyn (1974) who considered it to be the most common vulture in the park. Consistent aerial surveys within the park began in 1970, continuing annually for many years (Howells & Hustler 1984). In 1979 and 1980, two-egg and three-egg clutches were found in a few nests along the Lukosi River (Sinamatella area) in the north of the park (Howells 1982). Despite these surveys, the actual numbers of White-backed Vulture nests were never collated. Howells & Hustler (1984) listed several areas where the species was found nesting while Hustler (1986) stated that there were 44 "known breeding areas". Hustler & Howells (1990) noted that the White-backed Vulture, normally a colonial nesting species, was generally a solitary breeder in the Hwange National Park. However, it was able to establish colonies at two sites where game management (culling) of large mammals, mostly elephants, was being carried out. One of these sites was abandoned permanently once the culling ended. No work on nesting White-backed Vultures has been done since then, resulting in an information gap spanning three decades. In 2012, Justin Seymour-Smith initiated a nesting survey on White-backed Vultures in the park, sending many photographs of nesting vultures and their locations to PM.

The lull in vulture work ended with the onset of the Asian vulture crisis (Naoroji 2006), stimulating scientists and conservationists in southern Africa to respond with plans that included censuses, conservation drives, and awareness campaigns on the vulture crisis (e.g. Anderson and Mundy 2001). In recent years there have been predictions and news of an African vulture crisis (e.g. Ogada *et al*. 2016), said to be of similar proportions to the Asian although from different causes. At the very least, populations of nesting vultures should be monitored, especially in view of the poisoning incidents that recur in Zimbabwe (Groom *et al*. 2012; Mabhikwa *et al*. 2014). Thus, a ground survey of nesting White-backed Vultures was initiated in the Hwange National Park in 2014 and the results are presented in this paper.

Study area

The Hwange National Park (14 651 km^2) is located in north-western Zimbabwe at altitudes ranging from 900 m to 1100 m. Vegetation is mostly woodland and scrubland dominated by *Baikiaea plurijuga*, *Terminalia sericea*, several *Combretum* species, and *Colophospermum mopane*, with less than 10% of the park consisting of open grassland or bushed grassland (Rogers 1993). The Park is divided into three administrative areas, viz. Main Camp, Sinamatella, and Robins. Main Camp sits on Kalahari sands dominated by open wooded savannahs, while Sinamatella and Robins camps are on basalt soils and dominated by mopane interspersed with grassland vleis. The climate is semi-arid, with occasional severe frosts (Childes & Walker 1987), and the annual rainfall is about 600 mm falling in one rainy season between November and April (Chamaillé-Jammes *et al*. 2009).

Methods

White-backed Vulture nesting sites were surveyed from 23-31 October 2014 when the deciduous trees in the park were mostly leafless and nests would be more easily spotted. Nests were searched for while driving along tourist roads within Main Camp and Sinamatella areas (the latter including the Deka Safari Area). Although the vultures have been reported to nest in the Robins area, logistical problems prevented any searches in this area. Since White-backed Vultures typically nest near water, placing their nests at the top of tallest trees within a selected area, the searches were guided by the location of water. In the Main Camp area, water points consist of artificial (pumped) and natural pans, and vleis, while in the Sinamatella area water points were mainly along river systems. Nests were spotted by two observers in the back of a pickup truck travelling at 30-50 km per hour; they had an unimpeded view of the surroundings at all times. The surveys were carried out between 0800 and 1700 hours.

Only nests with adult vultures, or chicks, in attendance were recorded as being active. Nests with adults in attendance were usually easy to spot, as the adult were visible from a distance, but nests without adults in attendance needed more attention as the juvenile was not always visible at once. Active nests were differentiated from failed ones by looking at the quantity of whitish droppings around the nest since occupied nests often had more fresh 'mutes'. Failed nests, with no signs of adults or a juvenile, but which had been previously occupied (with adults in attendance at some point during the season) were also recorded. In most instances, nesting trees were identified (van Wyk and van Wyk, 1997) and the nest heights measured. The coordinates of the nest sites were determined using the mapping software QGIS, as were the inter-nest distances. Differences in nesting heights and the average inter-nest distances in Main Camp and Sinamatella areas were tested using independent t-tests with significance set at $p < 0.05$. In addition to October 2014 survey data, data from the Seymour-Smith survey (2012) were included in the map. He also drove along tourist roads in the Main Camp area in search of active and occupied nests, identified nesting trees and estimated the heights of nests.

Results

A total of 56 nests were located in the 2014 survey, 29 in the Main Camp area and 27 in Sinamatella. Twenty-three nests were active, with chicks only, or with both chicks and adults being present. In contrast, all 31 nests mapped in the 2012 survey were active. All of these nests were located near water bodies, either along rivers or near pans (Figure 1).

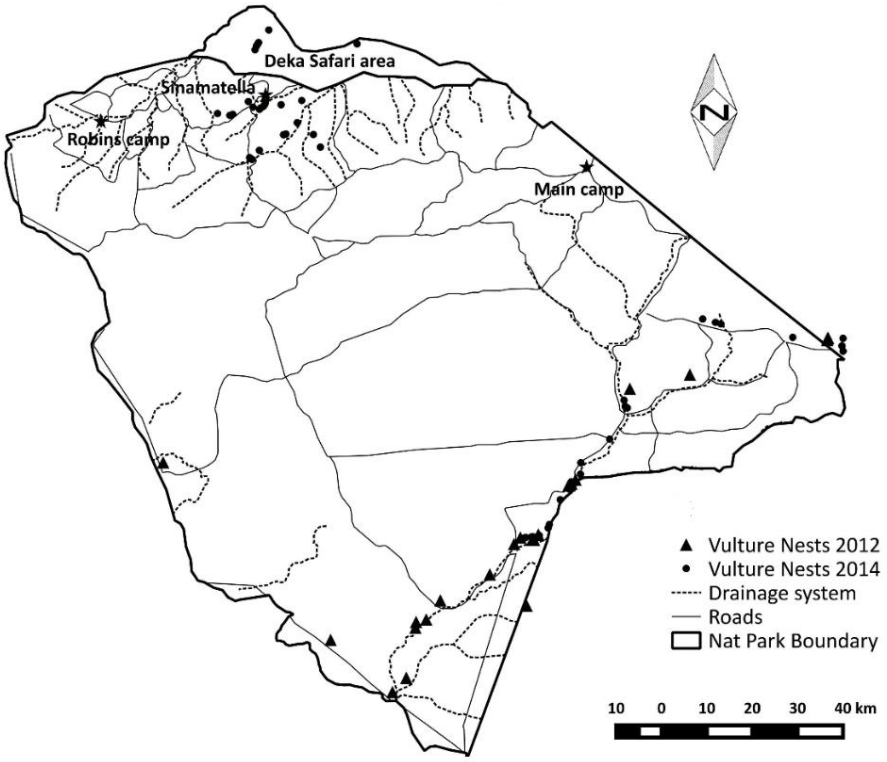


Figure 1. The location of White-backed Vulture nests in Hwange National Park in relation to roads and water courses

Altogether 15 or more tree species were used for the 56 nests (Table 1). Some of these were thorny trees, such as the acacias (*Vachellia*, *Senegalia* and *Faidherbia* spp.) as well as *Ziziphus mucronata* and *Terminalia prunioides*. There was no significant difference ($p > 0.05$) between the mean nest heights in the Main Camp (18.78 ± 6.84 m) and Sinamatella areas (16.97 ± 4.81 m).

Table 1. Tree species used for nesting in the Hwange National Park. Data for 2012 from Seymour-Smith, 2014 data from this survey

	Main Camp		Sinamatella
	2012	2014	2014
Vachellia erioloba	2		
Vachellia fleckii		3	
Senegalia nigrescens	2		3
Faidherbia albida			3
Unidentified acacias		2	2
Albizia harveyi	4		
Albizia amara			1
Burkea africana	13	7	
Colophospermum mopane	1		1
Combretum imberbe	3	1	1
Combretum erythrophyllum		1	
Ziziphus mucronata	1		
Guibourtia coleosperma		2	1
Lonchocarpus capassa		13	2
Adansonia digitata			7
Afzelia quanzensis			1
Diospyros mespiliformis			2
Terminalia prunioides			2
T. stenostachya			1
Hyphaene coriacea	5		

All nests were located near water bodies, either along rivers or near pans. Around Main Camp, nests were between 1-3 km apart, with outliers being mostly nest sites occurring at pans isolated from the major pan systems. In the Sinamatella/Deka area, inter-nest distances ranged from 2-5 km with most nests occurred along river systems, with some outliers on the few pans that occur in the area. The most isolated nests were one on the Botswana border about 50 km from its nearest neighbour (it may have had closer neighbours in Botswana), and one in the Deka Safari Area 25 km from its neighbours. There were no significant differences in the average inter-nest distances (mean ± standard error of the mean) between Main Camp (4.79 ± 8.8km) and Sinamatella (4.47 ± 6.43) (t-test, $p > 0.05$).

Discussion

Estimating the numbers of animals capable of ranging over large areas, such as White-backed Vultures, presents a number of difficulties. In this case, monitoring a breeding population should give more accurate results than roadside surveys, as the latter depend on carcass locations. Finding White-backed Vulture nests was said to be relatively easy but nests can be easily overlooked from ground surveys (Monadjem and van Zyl 2009). Similarly, Mundy (1982) intimates that ground surveys afford the most accurate search, with aerial surveys needing adjusting by a correction factor (Murn & Botha 2016). Potential errors in road counts include nests that might be missed because they were far from the road, those that were hidden below the tree canopy, or those where breeding had failed before the survey in October. The results given here probably represent the minimum number of breeding vultures in the park. Comparing results from different years may also introduce errors since these vultures which may appear in an area breed there and then disappear in the next year or two (Hustler & Howells 1990; Mundy *et al*. 1992). This may have occurred in the far south of the park where incidents of elephant poisoning have been reported (Muboko *et al*. 2014).

The results of this survey confirm that White-backed Vultures nest in loose colonies, clustered in riverine habitats with nests mostly placed at the tops of tall riverine acacia trees. The vegetation of Hwange National Park consists mostly of teak (*Baikiaea plurijuga*) and mopane (*C. mopane*) woodland, but not a single nest was found in a teak tree and very few in mopane. These trees may be easier for mammalian predators to climb since they lack the thorns found on acacias. The huge areas of the interior of the park, generally on Kalahari sands, are waterless for much of the year and may not support a permanent population of game animals (or vultures) but some 'isolated pairs' have been reported in these areas (Hustler & Howells 1990).

A minimum of 87 nests (i.e. pairs) of the White-backed Vulture in Hwange National Park is a small number and a low density (0.006 km^{-2}). Higher densities have been reported elsewhere, notably in the Nzotho section of Hlane National Park, Swaziland (41 km^{-2}) where there were 109 nests (2.67 km^{-2}), the highest known density of this species in Africa (Monadjem & Garcelon 2005). This is closely followed by an increasing number of pairs on Dronfield Ranch, Kimberley, South Africa where there were 104 in about 60 km^2 (0.58 km^{-2}) (A.J. Anthony, personal communication, 2015), and 85 nests in the Lesoma Valley, Botswana (Laver 2011). Several other places in southern Africa with large numbers of these vultures include the Okavango Delta (Tyler and Bishop 1998) and Kruger National Park (Murn *et al.* 2013).

In conclusion, this survey provides a baseline against which to determine the status of White-backed Vultures in the Hwange National Park and it should be repeated on a regular basis so that changes in their population can be detected. Future monitoring of the population would be improved by the use of aerial surveys in combination with ground searches.

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FIELD OBSERVATIONS

June 2017 to May 2018

C.T. Baker

Part 1: June to November 2017

As in the previous couple of years these observations include several records of migrants either over-wintering or arriving here on extremely early dates. Some of these records are highly unusual if not unprecedented. Adverse conditions in the Palaearctic region or in Africa to the north of us may necessitate early movement south, and failed breeding attempts might also encourage some migrants to leave the northern hemisphere earlier than normal. Whatever the causes, we are in a period when exceptional unseasonal occurrences are taking place.

The number of **Ospreys** *Pandion haliaetus* visiting us may well be on the increase and winter records are certainly more prevalent. It is therefore worth noting that South Africa holds two confirmed breeding records (Hockey *et al*. 2005. *Roberts' birds of southern Africa*, VIIth ed., p. 474). Whilst both go back a good number of years, the possibility of this bird breeding here at some stage should not be ruled out (for possible breeding in Zimbabwe, see Couto & Couto, 2014. *Honeyguide* **60**: 49-50).

Whilst not relating to this period, David Ewbank contributed an extract from the SA Rare Bird News Report of October 2016 that mentions a pair of **African Skimmers** *Rynchops flavirostris* had bred successfully at Nottingham Estates, Beit Bridge. Sightings of two birds from there have been mentioned previously in Field Observations but with no indication of breeding taking place.

References made in the text to the Atlas refer to Harrison *et al*. 1997. *The atlas of southern African birds* and not to the current SABAP2 exercise. Birds reported from a quarter degree square in which they do not appear in Harrison *et al*. are shown with the symbol † after the QDS code. Records submitted by Ian Riddell from input to SABAP2 are identified with the observers' initials. Records have also been obtained from the Special Species Sightings site on WhatsApp.

Reports of species marked * are subject to ratification by the Rarities Committee.

Waterbirds and allied species

There were 91 **Little Grebes** *Tachybaptus ruficollis* at Aisleby farm, Bulawayo (2028 B1), on 3 June but no more than seven were counted in each of the following five months (SM *et al*.). A group of 43 **Great White Pelicans** *Pelecanus onocrotalus* was at Ngamo, Hwange NP (1927 A2), on 10 August (CJ), while in October one was in the Mukadzapela area, Matusadona (1628 D3), on the 9th (KWr), 27 were over Kariba Heights (1628 D2) on the 21st (SE) and a day later six were on Kent Estate dam, south of Norton (1830 B1) (F&TC). Single **Pink-backed Pelicans** *P. rufescens* were reported from Chine Pool, Mana Pools (1529 C2), on 8 and 9 June (NF) and Mana Mouth (1529 C4) on 7 October (TAr) when two were also seen at Sanyati East, Lake Kariba (1628 D4) (CM).

A **Purple Heron** *Ardea purpurea* seen near Alaska Mine, Chinhoyi (1729 B4†), in July (DK) was further west than expected. At Aisleby **Yellow-billed Egrets** *Egretta intermedia* were present between August and November with nine on 5 August being the highest count (SM *et al*.). A record from the Kanyemba area (1530 C2†) in late August (TW) pushes this bird's range east of 30°E along the Zambezi; 11 were noted at Hwange Colliery number 3 dam (1826 A4) on 11 October when 16 **Little Egrets** *E. garzetta* were also present (FW).

A **Black Heron** *E. ardesiaca* at Lions Head dam, 45 km peg Harare-Shamva road (1731 D1†) on 22 October (CB) was a little further south than noted previously in that area. On 1 July a **Squacco Heron** *Ardeola ralloides* appeared at Aisleby where it is generally uncommon during the winter (SM *et al*.); also unusual was a **Rufous-bellied Heron** *A. rufiventris* at Hippo Pools (1731 B2†) on 22-23 July (TW). Two **White-backed Night Herons** *Gorsachius leuconotus* were on an island in the Zambezi opposite Trichilia Camp (1529 C2) on 6 September (J-MB), and one was reported from Maabwe Bay, Binga district, Lake Kariba (1727 C3†) on 21 October (SR). In the Honde Valley a pair with chicks was at Wamba Dam, Aberfoyle (1832 B4†), on 23 October and an adult, also with young in tow, was on the Pungwe river four days later (MS). These Honde records represent a significant range expansion, but with breeding involved it suggests the species is well settled along this part of the eastern border.

There were several winter **White Stork** *Ciconia ciconia* records from across the country with the largest group comprising eight at Sanyati West on the Matusadona shoreline (1628 D1) on 26 August (CM). No large arriving numbers were reported apart from 30 or more that touched down at the Umguza Irrigation Scheme outside Bulawayo on 25 November ahead of a strong weather system closing in from the north (JV). In mid-June five **Black Storks** *C. nigra* were at the Salt Pans, Hwange NP (1826 C1), a favourite spot of theirs (J&JB). An **Abdim's Stork** *C. abdimii* with a broken right wing was at Fothergill Island, Lake Kariba (1628 D1), on 21 August (CM), and another wintering individual flew over Zebra vlei, Mana Pools (1529 C4) on 7 September (J-MB).

A somewhat unusual record was a **Saddle-billed Stork** *Ephippiorhynchus senegalensis* at the Lake Chivero Bird Sanctuary (1730 D4), on 10 July (RD) while two adults with four juveniles at Njiri Pan, Mana Pools, on 10 September (TAr) appear to have raised an optimum clutch. Large winter flocks of **Yellow-billed Storks** *Mycteria ibis* comprised 50 at a seasonal pan behind Mcheni 1 camp, Rukomechi (1529 C4), on 10 June (J-MB) and 37 in the Mukadzapela River area, Matusadona, on the 30th (PTe).

Sacred Ibises *Threskiornis aethiopicus* at Aisleby peaked at 325 on 3 June with 191 on 2 September the next highest and just 12 remaining in November (SM *et al*.). **Glossy Ibises** *Plegadis falcinellus* were only noted there between July and September with a peak of 30 on 5 August (SM *et al*.), and a sighting on the Angwa River (1630 A2†) in late August (TW) is a slight expansion of range southwards from the Zambezi. In August two **Hadeda Ibises** *Bostrychia hagedash* were at Aisleby on the 5th (SM *et al*.) and 25 were noted at Triangle Club (2131 A2) on the 9th (SW). They are not normally expected in Hwange NP so a record from the Ngamo area (1927 A2†) in November (AT) is of some significance.

Approximately 36 **Flamingos**, thought to be **Greater** *Phoenicopterus roseus*, flew downstream near Rifa, Chirundu (1628 B2), on 20 July (EB) and on the 24th about 30 near the Nyamatusi channel (1529 C2†) were probably from the same group (J-MB). A **Lesser Flamingo** *Phoeniconaias minor* flew with a group of **White-breasted Cormorants** *Phalacrocorax lucidus* at Kent Estate dam (1830 B1†) on 6 August (F&TC) and another was seen at Ngamo Plains on the 10th with the 43 **Great White Pelicans** mentioned above (CJ).

209 **White-faced Ducks** *Dendrocygna viduata* were at Aisleby on 1 July where counts seldom rise above a hundred (SM *et al*.), and about 125 were at Hwange Colliery number 3 dam on 11 October (FW). **Cape Teal** *Anas capensis* were noted at Aisleby only in September and November with two on both occasions, while the only **Hottentot Teal** *A. hottentota* record from there comprised 23 on 25 November (SM *et al*.); in Harare one and two were at Ballantyne Park and the neighbouring Staley dam (1731 C3) respectively on 14 September (RMacD). 84 **Red-billed Teal** *A. erythrorhyncha* on 2 September was the highest Aisleby count although numbers last winter were much higher, and the only **Cape Shoveller** *A. smithii* reported was seen at this site on 25 November (SM *et al*.).

At Mazvikadei, Banket (1730 A4), four **African Pygmy Geese** *Nettapus auritus* were on the Maquadzi river on 3 August (DK) with a pair on the dam itself on 15 October (BM). **Spur-winged Geese** *Plectropterus gambensis* seldom visit Aisleby but seven were there on

1 July (SM *et al.*); 59 were at Hwange Colliery number 3 dam on 11 October (FW).

Raptors

Two wandering **Hooded Vultures** *Necrosyrtes monachus* were in the Karoi farmlands (1629 D1†) on 18 June (JP). At Gonarezhou, two **Lappet-faced Vultures** *Torgos tracheliotos* were over the Runde crossing between Tambahata and Muchaniwa Pans (2132 A4) on 6 August followed by one at Chipinda Pools (2131 B4) on the 9th (IR). A **White-headed Vulture** *Trigonoceps occipitalis* was at the Rhino Camp turn-off (1628 D3), Matusadona NP, on 4 June (MB), another was in the Chilojo cliffs area of Gonarezhou (2132 A3), on 5 August (IR) and in the northwest an adult male was seen at Matetsi unit 5 (1825 B4) on 3 November (JV). A wanderer drifted into the Figtree area (2028 A4†) in September (JR), probably from Botswana. The largest mixed flocks were 112 **White-backed** *Gyps africanus* and two **Lappet-faced** on a zebra carcass on the Cawston Block, 60 km north of Bulawayo (1928 C2), on 27 August (SN) and a massive 200 **White-backed**, 50 or more **Hooded**, five **Lappet-faced** and five **White-headed** in the Ngamo area, Hwange NP (1927 A2) on 12 November (RR).

Single **African Cuckoo Hawks** *Aviceda cuculoides* were on the Umfuli river, Chegutu (1830 A1), on 28 August (JW) and at the Tsindi Ruins, Marondera (1831 B1), on 24 September (IR). Around Harare, **Bat Hawks** *Macheiramphus alcinus* were at the Greystone Preserve (1731 C1) on 6 June (TW), in Eastlea on 7 July (IL) and Highlands on 29 November (JoF), both (1731 C3). Elsewhere individuals were near the Mana Pools airstrip on 5 July (TAr), Rifa Camp on 21 August (NH) and Kipling's Lodge, Ume River (1628 C4), on 17 September (PTe).

A **Black Eagle** *Aquila verreauxii* attempted to catch a baboon at Hwange colliery (1826 A4†) on 21 September (FW) and a pair at Christon Bank (1731 C1) flew towards Mazowe Dam on 1 October (DoW). **Lesser Spotted Eagles** *Clanga pomarina* normally arrive here during October, as with one just south of Shangani (1929 C1) on the 6th (TW). Over-wintering is rarely, if ever, noted so two August records are therefore open to conjecture; one was near the first gate on the Marongora-Mana Pools road on the 12th (IL) and another at Kanyemba Island, Chirundu (1628 B2), on the 19th (KW). A record from Ngamo, Hwange NP (1927 A2†), in November (AT) represents marginal movement from the west. A dark morph **Booted Eagle** *Hieraaetus pennatus** circled over Siya Lima, Guruve (1630 D2†), on 30 June (JV). A pair of **Ayres's Hawk-eagles** *Hieraaetus ayresii* was found about 15 km northeast of Mutoko (1732 A4†) on 21 June (IL) and three adults were at Ingwe pans, Mana Pools (1529 C4), on 10 September (IR).

Martial Eagles *Polemaetus bellicosus* were well reported from within and around the National Parks. Elsewhere one was about 165 km from Bulawayo on the Beit Bridge road (2129 A2) on 17 July (DE); two adults and an immature were over Cawston Camp (1928 C2) on 26 July (JV); one caught a rodent 17 km from Bindura on the Harare road (1731 A3) on 6 September (JW) and a juvenile was at Mazuri Ranch, Kwekwe (1829 D4), on 4 October (DK). For the third year running a chick hatched on Longueville Farm, Gwanda (2028 D4) (SN).

Western Banded Snake Eagles *Circaetus cinerascens* were reported from Mana Pools, Lake Kariba and Hippo Pools with an exceptional record of one at Kadoma (1829 B4†) on 16 October (CD); this species continues to be found in new areas. Over 30 **Bateleur** *Terathopius ecaudatus* records involving 53 birds were received, the vast majority coming from the Zambezi Valley, Hwange NP, Hippo Pools and Gonarezhou NP. Elsewhere, pairs seen in July were in the Honde Valley near the Pungwe River (MS), with a juvenile in the Hwange colliery area (1826 A4) (FW), and at Mtokoszi dam, Bubye Valley Conservancy (2130 A2) (ND). An unclassified individual was over communal lands near the Bulawayo-Victoria Falls road at the 304 km peg (1826 B4) on 2 November (JV).

A **Palm-nut Vulture** *Gypohierax angolensis** was at the Chilojo cliffs, Gonarezhou (2132 A3), on 21 November (AF). Following the previous year's early **Steppe Buzzard** *Buteo buteo* records, another early arrival was at Musango on 24 August this year (SE). Birds arriving in October were at Haka Park, Harare (1731 C3), on the 15th (J-MB) and Mazuri Ranch, Kwekwe (1829 D4), on the 22nd (DK).

An **African Marsh Harrier** *C. ranivorus* was on Marlborough vlei, Harare (1730 D2), on 31 October (RC). A female **Western Marsh Harrier** *Circus aeruginosus* at Komani Farm, north of Harare (1730 D2), on 7 November (IR) and a juvenile **Montagu's Harrier** *C. pygargus* at the Umguza Irrigation Scheme (1928 D3) on 5 November (JV) would have recently arrived. A male **Montagu's** was at Widgeon Pan, 32 km peg Chivhu-Gutu road, Felixburg (1930 B4), on 23 November (J-MB) and an adult pair of **Pallid Harriers** *C. macrourus* was standing in short grass near the Inyangombe River, Nyanga (1832 B4), on 25 November (IR).

The number of wintering **Ospreys** *Pandion haliaetus* this year was the highest ever reported. In June they were at Starvation Island, Lake Kariba (1628 C4) (SE), Mazvikadei Dam (1730 A2) (BM), Sanyati West (1628 D3) (MB) and 3 km upstream of Chirundu (1628 B2) (EB). In July they were noted at Mtokoszi Dam (2130 A2) (ND), and at Lake Kariba between the mainland and Fothergill (CM) and near Elephant Point (1628 C4) (DeW). Thereafter two were at Musango, Lake Kariba (1628 C4) in August and one in September (SE), two at Rifa in both those months (NH); on Lake Kariba in September one was at Sanyati West (CM) and two over Rhino Island (1628 C4). October is regarded as the month in which they arrive and individuals were at Mazvikadei Dam on the 15th (BM), Musango on the 26th (SE) and Rifa on the 30th (NH) but as these sites hosted wintering birds their actual status is uncertain. The only November record was one at the Sengwa River, Chete Safari Area (1727 D1), on 13 November (SH).

An urban **Peregrine Falcon** *Falco peregrinus* was spotted near Admiral Tait School, Eastlea (1731 C3), on 4 September (IR). **Eurasian Hobbies** *F. subbuteo* normally arrive here in November so early October records of an immature at Riverside Ranch, Hwange, on the 2nd (FW) and two between Fothergill and Sanyati West on the 7th (CM) are exceptional. Also unusual, as records from the southwest of the country are somewhat sparse, was a November sighting in the Mazunga area, Bulawayo-Beit Bridge road (2129 D2†) (J-MB). An **African Hobby** *F. cuvierii** was recorded downstream of Mana Pools at Chikwenya (1529 D1) at the end of November (RMacD). In QDS 1529 C4 at Mana Pools a **Red-necked Falcon** *F. ruficollis* was behind Long Pool on 9 June and in the nearby Palm block (1529 C4) on 10 July (JM-B).

14 **Lesser Kestrels** *F. naumanni* were noted at Widgeon Pan on 23 November (J-MB) and one was at Umguza two days later (JV). A **Dickinson's Kestrel** *F. dickinsoni* ventured into the Hwange Colliery complex on 18 July (FW), and in Gonarezhou a pair was at the Tambahata-Muchaniwa crossing on 6 August with a single just south of Tambahata Pan (2132 A4) on the 7th (IR).

Gamebirds, Rails and Cranes

Natal Spurfowl *Pternistis natalensis* occasionally wander into Harare gardens and one did so at Newlands (1731 C3) on 14 November. A flock of 38 **Crested Guineafowl** *Guttera pucherani* came to drink at Ingwe pans on 10 September (IR); large groups like this can occur occasionally.

A **Purple Swamphen** *Porphyrio madagascariensis* on Kent Estate dam, near Selous (1830 B1†) in August (F&TC) represents a slight expansion of its range south of Harare. A juvenile **Lesser Moorhen** *Gallinula angulata* spent three days at Makwa Pan, Hwange NP (1827 C3), between 12-14 July (SH). **Red-knobbed Coot** *Fulica cristata* numbers at Aisleby ranged from 131 on 3 June down to 11 on 5 August, seven of which were juveniles (SM *et al.*). **African Finfoot** *Podica senegalensis* at less usual places during August were on the Maquadzi River, Mazvikadei (1730 A4†) on the 3rd (DK) and Mteri Dam, Chiredzi (2131 B3†) on the 24th (CH).

No fewer than seven **Kori Bustards** *Ardeotis kori* were on a recent burn on Chamabonda vlei, Victoria Falls NP (1725 D3), on 30 August (SE). A nice **Black-bellied Bustard** *Lissotis melanogaster* record from within Harare was one at Haka Park on 15 October (J-MB).

Waders, Gulls and Terns

Six **Lesser Jacana** *Microparra capensis* were at Widgeon Pan on 20 June (GD). Small numbers of **Greater Painted Snipe** *Rostratula benghalensis* noted at Mana Pools were at Chitake (1629 A2) on 6 July

(SH), Chisasiko (1529 C2) on 23 July (J-MB), Mcheni on 26 July (PTe), in the Nyamatusi Wilderness Area (1529 C2) in August (J-MB) and Ingwe pans on 8-11 September. Elsewhere about four were heard at Muchaniwa Pan, Gonarezhou (2132 A4), on 5 August (IR) and singles were at Kennedy 1 Pan, Hwange NP (1827 C3) on 23 and 25 August (SH) and Rhino Safaris, Lake Kariba, on 1 October (PTe). Two at Greengrove Dam, Harare (1731 C3) on 11 October (DD) were followed by two females and a male the following day (J-MB).

Three **Caspian Plovers** *Charadrius asiaticus* were on Fothergill on 17 September (CM) and one was seen on 16 October at Umguza where a **Green Sandpiper** *Tringa ochropus* was noted on 14 November (JV). At least two **Senegal Lapwings** *Vanellus lugubris* were heard in the early morning at Muchaniwa Pan on 6 and 8 August (IR).

A wintering **Common Greenshank** *T. nebularia* at a seasonal pan near Mcheni 1 (1529 C4) on 10 June was joined by another the following day (J-MB). **Marsh Sandpiper** *T. stagnatilis* and **Little Stint** *Calidris minuta* records from the Beatrice area (1830 B4†) in October indicate slight movement from the north in both species (J-MB). **African Snipe** *Gallinago nigripennis* were reported from Nyamepi (1529 C2†) on 27 August (F&TC). Historically this is not a middle Zambezi bird but records have increased in the last few decades.

Two **Pied Avocets** *Recurvirostra avosetta* on 2 September was the only Aisleby record (SM *et al.*). They are seldom found in Hwange NP but were reported from Shumba pans (1826 C4†) in mid-November (SL), while 34 at Crowborough ponds (1730 D4) on 25 November (IL) was a good number close to Harare. A **Black-winged Stilt** *Himantopus himantopus* at Greengrove Dam on 8 October was probably the first record from there for 20 years or more (IL DD). South-bound **Black-winged Pratincoles** *Glareola nordmanni* were in the Shumba area (1826 C4†) in mid-November (SL).

A **Lesser Black-backed Gull** *Larus fuscus* was seen at Goliath Safari Camp, Mana Pools (1529 C2), on 2 August (J-MB). An exceptional sighting of an estimated 2000 **Grey-headed Gulls** *Chroicocephalus cirrocephalus* nesting on Island 155, Lake Kariba (1628 C2), on 7 July (PTe) was quite possibly the largest flock ever recorded in this country and probably comprised birds from the Zambian population. One was at the Salt Pans, Hwange NP, where seldom reported, on 4 June when a **Whiskered Tern** *Chlidonias hybrida* was also present (CB).

A **Gull-billed Tern** *Gelochelidon nilotica** was seen by various observers on a farm dam a few kilometres southeast of Beatrice (1830 B4†) from 15 to 17 October (see Wood, *this issue*). Single **Caspian Terns** *Hydroprogne caspia* moving upstream on the Zambezi were at Nyamepi, Mana Pools (1529 C2†), on 27 August (F&TC) and Rifa on 16 November (NH). Small numbers of **African Skimmers** *Rynchops flavirostris* were widely reported from known localities, with breeding noted at Chipinda Pools on 29 August (EvdW), upstream of Victoria Falls (1725 D4) on 14 September with four nesting pairs (CB), and two apparently nesting at Palm Bay, Lake Kariba (1628 D3), on the late date (for breeding) of 10 November (PvN).

Other non-Passerines

Numbers of **Speckled Pigeons** *Columba guinea* had reached at least 18 at Robins Camp, Hwange NP (1825 D2), by 7 October (KM). An **African Mourning Dove** *Streptopelia decipiens* record from the Kanyemba area (1530 C2†) in late August (TW) indicates movement either downstream along the Zambezi or from the southeast as a result of human encroachment from the Dande communal area opening up suitable habitat. A **Tambourine Dove** *Turtur tympanistria* in the Triangle area (2131 A2†) in July (LW) adds a new QDS to this bird's southeast lowveld distribution. At Muchaniwa a notable sighting on 6 August was of *c.*60 **African Green Pigeons** *Treron calvus* sitting in one tree (IR).

Two **Grey-headed Parrots** *Poicephalus fuscicollis* were in Zambezi NP, Victoria Falls (1725 D4), on 5 June (CB JB); on the middle Zambezi two were at Mana Pools on 13 July (AF), four at Ingwe pans on 8 and 9 September (IR) and two at Chine Pool on 10 September (TAr). Two at Muchaniwa on 6 August were followed by three on the 8th where **Brown-headed Parrots** *P. cryptoxanthus* were also evident over the same period (IR). At least three **Lilian's Lovebirds** *Agapornis lilianae* photographed at Whitehead Ponds, Chegutu (1830 A1), in July were in close proximity to **Meyer's Parrots** *P. meyeri* and were presumably escaped birds (IL). One wonders how long they might survive on the highveld, and whether they would breed if a suitable site was found. Flocks of 30 or more *lilianae* were seen daily at Mana Pools from 10-13 July (AF) and *c.* 100 were estimated to be at Ingwe pans on 8-11 September (IR).

An **African Cuckoo** *Cuculus gularis* at Mazvikadei marina on 23 August (BM) arrived here earlier than normal. Another early migrant was a **Black Cuckoo** *C. clamosus* near Nyazura (1832 C3) on 30 August (GD), with more usual arrivals noted on 8 October at Hillside dams, Bulawayo (2028 B1) (IL), 10 October on Lake Kariba at Bumi Hills (1628 C4) (SE) and Spurwing Island (1628 D1) (CM), 5 November at Hippo Pools (TN) and 11 November in Harare (IR). A young **Levaillant's Cuckoo** *Clamator levaillantii* being fed by **Arrow-marked Babblers** *Turdoides jardineii* at Mandara, Harare (1731 C3), on 1 July (JBa) signifies late breeding following last season's good rains. A black morph **Jacobin Cuckoo** *C. jacobinus* in the southeast lowveld at Malilangwe (2131 B2) on 2 July (GD) is of considerable interest. Apart from the extraordinary mid-winter sighting date, Irwin (1981, p. 163) surmised that such melanistic birds may constitute only about 1% of the breeding form *serratus*.

Single **Thick-billed Cuckoos** *Pachycoccyx audeberti* were at the Lake Chivero Game Park (1730 D4†) on 24 July and west of Selous (1830 A2†) on 3 August (F&TC), Hippo Pools from August to November (TN J-MB), Kuimba Shiri, Lake Chivero (1730 D4), on 30 September (F&TC) and 11 November (TC), Mount Pleasant, Harare (1730 D4), on 2 October (DS), and in November at Umguza (1928 D3) (JV) and Chikwenya, Mana Pools (1529 D1) (RMacD). Wintering **African Emerald Cuckoos** *Chrysococcyx cupreus* were near Leopard Rock, Vumba (1932 B2), on 26 July (SSS) and Aberfoyle (1832 B4) on 1 August (MS). Small numbers of **Klaas's Cuckoo** *C. klaas* visit during the winter and were seen at Teviotdale, Harare (1731 C1), on 8 and 16 July (CB) and Hippo Pools on 19 August (TN). **Diderick Cuckoos** *C. caprius* seldom reach us during September but a female was at Hillside Dams, Bulawayo, on the 17th (HL); the next one reported was at the Mukuvisi Woodlands, Harare (1731 C3), on 30 October (CD).

Green Malkohas *Ceuthmochares australis* continue to be found in the Chilo sand forest with four on 3 June and 15 August (TM). A **White-browed Coucal** *Centropus superciliosus* recorded west of Alaska Mine, Chinhoyi (1729 B4†) in July (DK) was some distance south of its known range.

Owls heard in a large Hatfield, Harare (1731 C3), garden on the night of 7 October were the **Wood** *Strix woodfordii*, **Scops** *Otus senegalensis*, **Southern White-faced** *Ptilopsis granti* and **Spotted Eagle Owl** *Bubo africanus*, while nesting **Barn Owls** *Tyto alba* were also present (PT). Two **Southern White-faced Owls** were heard in Newlands during the night of 20 June (IR) and records of this owl and a **Square-tailed Nightjar** *Caprimulgus fossii* from Kent Estate (1830 B1†) in August (F&TC) indicate a range expansion south of 18°S for both species. **African Barred Owlets** *Glaucidium capense* were noted at different locations within the Selous QDS (1830 A2†) in June and August (F&TC) and a September Hwange NP record represents movement south into the Ngweshla area (1927 A1†) (JR). A **Pel's Fishing Owl** *Scotopelia peli* was on the Runde River in the Marhumbini area of Gonarezhou on 23 July (NM), two were in front of Goliath Safari Camp (1529 C2) 31 July (J-MB) and another was downstream of Mongwe Camp, Chirundu (1528 D4), on 11 November (DK). A **Rufous-cheeked Nightjar** *Caprimulgus rufigena* at Hidden Rocks, Juliasdale (1832 B3†), on 25 November (IR) was further east than expected.

Horus Swifts *Apus horus* recorded in the Mazunga area, Bulawayo-Beit Bridge road (2129 D2†), in November (J-MB) had either moved in from the north or from the more southerly Limpopo population. At the same locality **Little Swifts** *A. affinis* and **Palm Swifts** *Cypsiurus parvus* were also found in new territory on 18 June (WG). A lone **Mottled Swift** *Tachymarptis aequatorialis* was at Aisleby on 2 September (SM *et al.*). Many **Böhm's Spinetails** *Neafrapus boehmi* featured at Mana Pools from 10-13 July especially at Mana Mouth (1529 C4) (AF).

Single **Half-collared Kingfishers** *Alcedo semitorquata* noted in November were below Lions Head dam (1731 B3†) (CB), Pine Tree Inn, Juliasdale (1832 B3) (DK) and at the Troutbeck fish ponds (1832 B2) (RC). A **Woodland Kingfisher** *Halcyon senegalensis* at Mcheni 3 (1529 C4) in the first week of October (GD) could well be the earliest Zimbabwe record yet. More usual November arrival dates were the 13th at Trichilia Camp (TAr), a day later at Rifa (EB), the 17th at Chiredzi (NM) and towards the end of the month in the new Inyantue Dam area, Hwange NP (1826 D1†) (SL).

Small winter flocks of **Southern Carmine Bee-eaters** *Merops nubicoides* were over Mola, Omay (1628 C4), on 1 June, at Bumi Hills twice in the same month (MB) and nearby at Musango on the 25th (SE). None were seen by IL at Mana Pools from 12-15 August, but on the 17th 50 or more were over Trichilia Camp (TAr); they were also noted on that date at the Chipandaure colony, Chirundu (1628 B2) (EB NH) and eight were over Spurwing Island on the 25th (CM). An unusual Harare garden record was a party of **Swallow-tailed Bee-eaters** *M. hirundineus* at Newlands on 17 August (IR).

A September **Racket-tailed Roller** *Coracias spatulatus* record represents movement south into the Ngweshla area (1927 A1†) of Hwange NP (JR). **Common Scimitarbills** *Rhinopomastus cyanomelas* and **Lesser Honeyguides** *Indicator minor* have extended their respective ranges east of 30°E along the Zambezi being noted in the Kanyemba area (1530 C2†) in August (TW). **Trumpeter Hornbills** *Bycanistes bucinator* heard at Bally Vaughan (1731 C2†) on 20 June (MBe) were closer to Harare than reported previously along the Harare-Shamva road. There is an isolated 1993 record from Mount Mamurgwi (Lions Head), a few kilometres to the north (Tree, 1994, *Honeyguide* **40**(3): 194). Somewhat unusual was a **Southern Ground Hornbill** *Bucorvus leadbeateri* standing on a house chimney on Irvine's Farm, Harare South (1830 B2), at the end of November (IL).

Acacia Pied Barbets *Tricholaema leucomelas* are little known in the northern third of the country so an August record from south of Selous (1830 A2†) (F&TC) is of interest. Away from gardens IR reports finding **Green-backed Honeybirds** *Prodotiscus zambesiae* more frequently these days than the **Brown-backed** *P. regulus*, while the latter remains the more prominent urban bird. The only **Brown-backed** reported from woodland habitat was on Tom Hulley road, Vumba (1932 B1), on 7 September when a *zambesiae* was also noted (BMb). Other **Green-backed** records came from Umwinsidale (1731 C1) on 22 October (DoW), Haka Park on 11 November and the Mukuvisi Woodlands in September, October and November when one was at an **Amethyst Sunbird** *Chalcomitra amethystina* nest (IR).

Passerines

African Broadbills *Smithornis capensis* in the Chilo sand forest (2132 A3†) on 3 June and 15 August (TM) had perhaps moved south into Gonarezhou from the Haroni-Rusitu confluence. Kent Estate (1830 B1†) became another new site for this bird when a female was seen on 22 October (F&TC). An **African Pitta** *Pitta angolensis* returned to the Lukosi River, Deka Safari Area, again this season and called from 16 November onwards (RR); a pair was at Chikwenya at the end of November (RMacD).

An over-wintering **Barn Swallow** *Hirundo rustica* was at Gonarezhou on 13 August (KvL) and arriving birds were noted at Teviotdale on 1 October (CB). The largest flock reported was at least 1000 at the Lake Chivero Game Park on 28 October (RC). **Blue Swallows** *H. atrocaerulea* were seen at three places within Nyanga NP on 25 November but numbered only six in all (IR). Three **Pearl-breasted Swallows** *H. dimidiata* were near Wild Geese Lodge, Wingate (1731C1), on 7 October (CB), and two were at the Lake Chivero Sanctuary on 10 July when two wintering **Black Cuckooshrikes** *Campephaga flava* were also present (RD).

Cinnamon-breasted Tits *Melaniparus pallidiventris* were at Hidden Rocks, Juliasdale (1832 B3†), on 27 November (IR) and others were seen on the Vumba at the Burma Valley turn-off (1932 B1) two days later (BMb). At the Mukuvisi Woodlands **Spotted Creepers** *Salpornis salvadori* were feeding a fledgling on 22 October (IR).

The 18°S 30°E full degree square was almost entirely devoid of **Terrestrial Brownbuls** *Phyllastrephus terrestris* during the Atlas years so an October record from near Beatrice (1830 B4†) might indicate this sedentary species was overlooked there previously. On the same visit **Yellow-bellied Greenbuls** *Chlorocichla flaviventris* were present (J-MB) and they were also reported in that month from Kent Estate (1830 B1†) (F&TC); this bird continues to be found in new areas. In the eastern districts **Miombo Rock Thrushes** *Monticola angolensis* were at the Honde Valley pinnacles, near Hauna (1832 B4†), on 2 September (MS) and on Tom Hulley road, Vumba, a few days later (BMb).

A **Familiar Chat** *Oenanthe familiaris* on the wall of a Monavale building site on 11 November was probably new to the area (IR). **Mocking Chats** *Thamnolaea cinnamomeiventris* are of localised occurrence within Hwange NP but were noted in the Shumba area (1826 C4†) in mid-November (SL). A **Red-capped Robin-chat** *Cossypha natalensis* was found at 1700 m at Pine Tree Inn, Juliasdale, on 25 November (IR) where it is probably a scarce seasonal visitor; Irwin (1981, p. 271) did not expect them to occur above 1500 m in the eastern highlands. **Collared Palm Thrushes** *Cichladusa arquata* noted at Hippo Pools (1731 B2†) on 18 July (TN) and in mid-November (J-MB) appear to be an addition to the camp's avifauna although there is a 1988 record of a pair with young in the neighbouring Umfurudzi Safari Area (Tree, 1989. *Honeyguide* **35**: 125). Since 2004, when **Bearded Scrub Robins** *Erythropygia quadrivirgata* were first reported from Lake Chivero, a small population has become established, one of which was seen on 10 October (JoF).

A **Garden Warbler** *Sylvia borin* was seen four times between 9 July and 15 August at Hogerty Hill, Borrowdale (1731 C1). Overwintering in this species is very scarce (CB). The **Icterine Warbler** *Hippolais icterina* is little known in much of the southwest of the country but was noted in November in the Mazunga area (2129 D2†) about 60 km from Beit Bridge on the Bulawayo road (J-MB). **Yellow-breasted Apalises** *Apalis flavida* found in new areas were on the Umfuli River near Bryden School, Chegutu (1830 A1†), on 16 July (IR), in the Ngweshla area (1927 A1†) in September (JR), and at Lions Head dam (1731 B3†) on 18 November (CB). **Grey-backed Camaropteras** *Camaroptera brevicaudata* and **Croaking Cisticolas** *Cisticola natalensis* are seldom mentioned but were recorded in October near Beatrice (1830 B4†) (J-MB) indicating slight movement from the north in both species. On 2 September a **Red-winged Warbler** *Heliolais erythropterus* was at the Honde Valley pinnacles (MS), probably a new site within this species' restricted eastern border range. Two **Pale-crowned Cisticolas** *C. cinnamomeus* were on Marlborough vlei on 4 November (RC).

A **Dusky Flycatcher** *Muscicapa adusta* in the Umfurudzi Safari Area (1731 B2†) early in September (IL) was a little further south than expected. **Collared Flycatchers** *Ficedula albicollis*, once so rare in this country, return to Cecil Kop, Mutare (1832 D3) each summer with the first one this year noted on 30 November (BMb). A **Grey Tit-flycatcher** *Myioparus plumbeus* was at Muchaniwa Pan on 7 August. **Black-throated Wattle-eyes** *Platysteira peltata* were on the Umfuli River near Bryden School (1830 A1†) on 16 July (IR) and at Lions Head dam (1731 D1†) on 18 November (CB). Several **African Paradise Flycatchers** *Terpsiphone viridis* were reported in June and July from low-lying areas with the only highveld wintering record coming from Mazuri Ranch, Kwekwe, on 23 June (DK). One of the *granti* race was at Muchaniwa Pan on 7 August (IR).

A friendly pair of **Mountain Wagtails** *Motacilla clara* on the Victoria Falls rain forest footpath (1725 D4) on 6 June (CB JB) and 6 July (DS) allowed approach to within two or three metres. Following last year's 5 September record of an early-arriving **Tree Pipit** *Anthus trivialis*, one was at the Honde Valley pinnacles three days earlier this year (MS). A pair of **Cape Longclaws** *Macronyx capensis* at Jabulani Safaris, Shangani (1929 C4†), on 4 September (GP) represent a slight expansion of range westwards.

South-bound **Lesser Grey Shrikes** *Lanius minor* were near Kennedy 2 Pan, Hwange NP, on 30 October (SH), at Komani Farm on 7 November (IR) and Aisleby where two were seen on 25 November (SM *et al*.). Ten **Retz's Helmetshrikes** *Prionops retzii* at the Lake Chivero Sanctuary on 10 July (RD) was a large highveld flock. Following last winter's **Chestnut-fronted Helmetshrike** *Prionops scopifrons* sightings in the Chilo sand forest (2132 A3†) three were seen there on 28 July (TM). Up to the 1990s this bird was found only

in the area around the Haroni-Rusitu confluence (2033 A1). Since then records have come from further south in Gonarezhou (2132 A3) and the Ndowoyo communal lands (2132 A4). While to the north, birds found on the slopes of Inyangani at Gleneagles and Aberfoyle Tea Estates (1832 B4) must have moved in from a different Mozambique population.

Violet-backed Starlings *Cinnyricinclus leucogaster* in Harare at Ballantyne Park at the end of July (AF) and Kambanji (1731 C3) on 5 August (DK) were either over-wintering or very early arrivals. 27 **Red-billed Oxpeckers** *Buphagus erythrorynchus* were at a roost site on Longueville Farm, Gwanda, on 10 June (SN). There has been little mention from south of Harare of the **Yellow-bellied Sunbird's** *Cinnyris venustus* well documented range expansion from the east in the 1980s so an October record from near Beatrice (1830 B4†) (J-MB) is probably long overdue. A **Western Violet-backed Sunbird** *Anthreptes longuemarei* in an *Acrocarpus* tree at Bryden School, Chegutu (1830 A1†), on 16 July was south of its known range (IR).

Six **Northern Grey-headed Sparrows** *Passer griseus* were reported from Victoria Falls (1725 D4†) on 26 July (DK). **Yellow-throated Petronias** *Gymnoris superciliaris* can move around opportunistically and at the Mukuvisi Woodlands on 12 August they were present in their hundreds (TW). About eight **Thick-billed Weavers** *Amblyospiza albifrons* were at Lions Head dam (1731 D1†) on 18 November (CB). **Cuckoo Finches** *Anomalospiza imberbis* have a patchy distribution south of 18°S but were noted at Widgeon Pan (1930 B4†) on 27 November (J-MB).

White-winged Widowbirds *Euplectes albonotatus* on the lower Vumba (1932 B1†) in September (F&TC) could indicate movement from the west or from the Mozambique border. **Orange-winged Pytilias** *Pytilia afra* are uncommon in Hwange NP but were seen at Masuma Dam (1826 C2) on 10 July (MZ). **Red-throated Twinspots** *Hypargos niveoguttatus* were found southwest of Lake Manyame (1730 C4†) on 1 October (F&TC). The **Lesser Seedcracker** *Pyrenestes minor* is known from only a few sites along the eastern border, one of which is Aberfoyle where one was seen on 4 September. In the same area a **Violet-eared Waxbill** *Uraeginthus granatina* was at the Pungwe River bridge (1832 B4†) on 25 November (MS). An unusually large flock of up to 80 **Yellow-bellied Waxbills** *Coccopygia quartinia* was seen in Nyanga NP on 25 November. Eight **Locustfinches** *Paludipasser locustella* were at Komani Farm on 21 October (IR).

The only **Magpie Mannikins** *Lonchura fringilloides* reported were at Umfuli creek, Chegutu, on 28 August (JW). A male **Village Indigobird** *Vidua chalybeata* in almost complete breeding plumage was with two females at Hogerty Hill on 10 September and was seen again on the 23rd in perhaps 75% plumage (CB); late dates for this degree of breeding dress. **Black-eared Seedeaters** *Crithagra mennelli* were at Hidden Rocks, Juliasdale, on 26 November (IR) and on the Vumba at the Burma valley turn-off three days later (BMb). A **Cabanis's Bunting** *Emberiza cabanisi* at Kadoma (1829 B4) on 16 October (CD) was on the western edge of its range.

Arrivals

Abdim's Stork 15 October Bindura (1731 A4) (RK), 23 October Harare (KvL); **Wahlberg's Eagle** *Hieraaetus wahlbergi* 12 August Gonarezhou (2132 A1) (CS), Gonarezhou (2132 A4) (TM) and near Mcheni (1529 C2) (J-MB), 19 August Harare (IR); **Amur Falcon** *Falco amurensis* 12 November Ngamo, Hwange NP (RR); **Common Sandpiper** *Actitis hypoleucos* last week July Chikwenya (RMacD), 14 August Masassanya Dam, Gonarezhou (2131 B4) (SMu); **Wood Sandpiper** *Tringa glareola* 13 August Mahove, Runde River, Gonarezhou (CS), 15 August Starvation Island and Musango (SE), 17 August Long Pool, Mana Pools (J-MB); **Common Greenshank** 16 July Umfuli River, Chegutu (IR), 17 August Long Pool (J-MB); **Marsh Sandpiper** and **Little Stint** 17 August Long Pool (J-MB); **Ruff** *Philomachus pugnax* 1 August Chisasiko, Mana Pools (J-MB), 8 August Musango (SE); **Red-chested Cuckoo** *Cuculus solitarius* 20 September Aberfoyle (MS), 27 September Nyanga, 7 October Harare (SMa), 10 October Mazvikadei (BM), 13 October Kadoma (1829 B4) (CD), 15 October Hippo Pools (TN); **Levaillant's Cuckoo** 9 October Harare (JBa); **Jacobin Cuckoo** 13 November Harare (JoF); **African Emerald Cuckoo** 29 October Hippo Pools (TN), 14 November Victoria Falls (DT), 18 November Gwanda (SN); **Black Coucal** *Centropus grillii* 10 November Harare (JM), 13 November Mwanga Lodge (GP); **African Pygmy Kingfisher** *Ispidina picta* 7 October Harare (PT); **Grey-headed Kingfisher** *Halcyon leucocephala* mid-September Mana Pools (JoF), 30 September Christon Bank (F&TC); **European Bee-eater** *Merops apiaster* 19 September Harare (JM SH); **European Roller** *Coracias garrulus* 14 November Harare (JM), 17 November Umguza (1928 D3) (JV); **Broad-billed Roller** *Eurystomus glaucurus* 7 October Mbala gate, Hwange NP, (MZ) and Hippo Pools (TN), 8 October Chegutu (JW); **White-throated Swallow** *Hirundo albigularis* 30 August Harare (GD); **Black Cuckooshrike** 15 August Harare (CB), 18 August Aberfoyle (RMacD), 9 September Hillside Dams, Bulawayo (HL); **Willow Warbler** *Phylloscopus trochilus* 22 September Harare (TW); **African Paradise Flycatcher** 28 August Hippo Pools (TN), 9 September Croton Campsite, Mana Pools (1529 C2) (J-MB), 13 September Harare (SW AF), 4 October Musango (SE), 12 October Chiredzi (NM) and Gwanda (SN); **Red-backed Shrike** *Lanius collurio* 7 November Harare (JM), 25 November Aisleby (SM *et al*.).

Departures

Swallow-tailed Bee-eater 15 October Hippo Pools (Tadious); **Red-capped Lark** *Calandrella cinerea* 4 November Art farm, Harare (1731 C1) (CB), 23 November Wigeon Pan (J-MB); **Capped Wheatear** *Oenanthe pileata* 4 November Art farm (CB).

Part 2: December 2017 to May 2018

Julia Duprée, one of the regular Aisleby team of observers, has commented on the decline of this important Bulawayo waterfowl site. It is now in a state of severe neglect and all waterbodies are covered with weed. It is clearly evident from records in this period that many open water and shoreline species have declined in number or abandoned this site altogether. This sorry state of affairs has been exacerbated by gold panning activity on part of the farm, which as a result is no longer accessible. Aisleby has long been an important source of ornithological data, not least because it has been meticulously monitored every month over a long period. The prospect of its loss as a prime site, for waterfowl in particular, is therefore of great concern.

A January visit to the Sango area of the Save Valley Conservancy identified a large number of species that were not recorded during the first Atlas exercise. Ian Riddell is of the view that many of these 'new' species were overlooked previously due to the lack of atlassing, and that may well be the case. Accordingly, the status of many seemingly out of range records contained in these observations has been impossible to define accurately. The area covered on this visit extended into three different quarter degree squares, which further complicates the issue. They are important records nonetheless and establish a marker for future visits.

Waterbirds and allied species

The decline in the number of **Little Grebes** *Tachybaptus ruficollis* at Aisleby Farm, Bulawayo (2028 B1) continued and a maximum of five were present from December to March and none thereafter (SM *et al*.). The only **Great White Pelican** *Pelecanus onocrotalus* noted was at Fothergill Island, Lake Kariba (1628 D1), on 12 February (CM). Good numbers of **White-breasted Cormorants** *Phalacrocorax lucidus* persist at Lake Chivero (1730 D4) with 220 at the Bird Sanctuary on 14 January (RD) and 80 on exposed rocks at Kuimba Shiri on the 27th (TC).

One and three **Yellow-billed Egrets** *Egretta intermedia* were at Aisleby on 9 December and 10 February respectively, followed by nine on 10 March but none were seen subsequently (SM *et al*.). On 27 January over 20 **Black Herons** *E. ardesiaca* were at Mazvikadei dam,

Banket (1730 A2), (IL, IR) where a **Slaty Egret** *E. vinaceigula* was seen on 21 January (DK) and remained for a few days (see Louw, *this issue*). 28 **Squacco Herons** *Ardeola ralloides* were at The Hideaway, Lake Manyame (1730 D3), on 28 January (KD) and six **Black-crowned Night Herons** *Nycticorax nycticorax* were at a pan at Sango, Save Valley Conservancy (2032 A2), on 8 January (IR).

Two **Little Bitterns** *Ixobrychus minutus* were at the Lake Chivero Sanctuary on 14 January (RD) and at the Mukuvisi Woodlands, Harare (1731 C3), a week later (KW). Singles seen thereafter around Harare were at Monavale vlei (1731 C3) on 18 February (IR), Marlborough vlei (1730 D2) twice in March and 7 April (RC) and Greengrove Dam (1731 C3) on 11 March (JP). **Dwarf Bitterns** *I. sturmii* occurred across the country with sightings at Songo Jena Pan, Guruve (1630 B1†) on 18 December (TW), Lukosi Camp, Deka Safari Area (1826 C2†) on 31 December (DA), three on the Save River, Save Valley Conservancy (2032 A2), on 8 January (IR), Greengrove dam on 14 February (TW) and at Kazungula (1725 C4) two days later (SC). One at Marlborough ponds on 26 April (RC) was leaving it late before departing.

The largest **White Stork** *Ciconia ciconia* flock comprised only *c.* 35 at a termite emergence at Sango (2032 A2) on 11 January (IR). One hopes larger numbers were around, albeit unreported. **Abdim's Storks** *C. abdimii* fared little better with 175 north of Bulawayo on the Umguza Irrigation Scheme on 29 December comprising the largest group. Five departing birds fed at this site on 15 April before moving on (JV) and seven were near Norton (1730 D3) on the late date of 18 May (PT). 60 **Woolly-necked Storks** *C. episcopus* were at Guvalala Pan, Hwange NP (1826 D3), on 17 December (JV) and 40 or more in Sanyati West bay, Lake Kariba (1628 D1), on 5 January (CM); a wanderer appeared at Wild Geese Lodge, Wingate (1731C1†), on 30 December (GB). Three **Marabou Storks** *Leptoptilos crumeniferus* at Chinga Pan, Sango (2032 A2†), on 11 January (IR) were well north of their southeast lowveld range. Over 250 landed around a dam near Wild Geese Lodge on 14 January (CB) and about 200 were at the Victoria Falls sewage ponds (1725 D4) in March (IL).

Sacred Ibis *Threskiornis aethiopicus* numbers ranged from 36 in December to 286 in April at Aisleby where **Glossy Ibises** *Plegadis falcinellus* were present from December to March with 59 on 10 March being the highest count noted since 2010 (SM *et al.*). 34 **Glossies** were at Lake Manyame on 17 February (DR) and 40 at Crowborough ponds, Harare South (1730 D4), on 17 March (TW). A **Hadeda Ibis** *Bostrychia hagedash* record from the Umguza River at Cawston Camp (1928 C2†) on 20 May (JV) is significant as they seldom venture further north than Aisleby in the southwest of the country.

Nine **African Spoonbills** *Platalea alba* were together at Fothergill on 12 February (CM). A **Greater Flamingo** *Phoenicopterus roseus* at Starvation Island (1628 C4†) on 28 December (SE) provided a scarce Lake Kariba record and even more unusual were four adults and a juvenile at the Lake Chivero Sanctuary (1730 D4†) on 14 January (RD J-MB).

Only a few **White-faced Ducks** *Dendrocygna viduata*, **Egyptian Geese** *Alopochen aegyptiaca* and **Red-billed Teal** *Anas erythrorhyncha* were at Aisleby from December to March because little or no open water was available. They dispersed entirely thereafter, apart from a lone **Egyptian Goose** (SM *et al.*). On the Zambezi over 300 of these geese were at Chirundu Safari Lodge (1628 B2) on 5 April (TAr) and 739 **White-faced Ducks** were counted at The Hideaway on 28 January (KD). Two **Fulvous Ducks** *Dendrocygna bicolor* at Ballantyne Park, Harare (1731 C3), on 2 December stayed for about a week (AF), and a record from Mandavu Dam (1826 C2†) in December (SL) is of note as they seldom occur in Hwange NP; five were at Mazvikadei on 27 January (IL IR). The provenance of a **Yellow-billed Duck** *Anas undulata* at Ballantyne Park early in April (DeW) is questionable, but it is unlikely to be a genuinely wild bird.

Aisleby has always been a prime site for **Cape** *A. capensis* and **Hottentot Teal** *A. hottentota* but the proliferation of surface weed means that this habitat has been lost. The only **Capes** recorded were two on 9 December with **Hottentots** doing only a little better with two in December and February and one on 10 March (SM *et al.*). Elsewhere two **Capes** were at Crowborough on 17 March (TW IL), two **Hottentots** were at the Lake Chivero Sanctuary on 14 January (RD), and there were eight on Lake Manyame on 28 January (KD) and five on 17 February (DR). The only **Southern Pochard** *Netta erythrophthalma* recorded at Aisleby was one on 9 December (SM *et al.*).

Two **African Pygmy Geese** *Nettapus auritus* were at Gletwyn Dam, Mandara (1731 C3), on 6 December (J-MB) and The Hideaway on 28 January (JP) with three seen elsewhere on Lake Manyame on 17 February (DR); a pair with seven or eight chicks was on Camp Hwange concession (1826 C4) on 9 April (J-MB).

400 **Knob-billed Ducks** *Sarkidiornis melanotos* and 85 **Spur-winged Geese** *Plectropterus gambensis* were at Tiger Safaris, Chirundu (1628 B2), on 4 December (GD) and these two waterfowl were also together in a flooded maize field near the Hunyani bridge, Harare-Chegutu road (1730 D3) on 10 February, numbering about 80 and 100 respectively (IL IR). About 54 **Spur-winged** were on a sandbar on the Save River (2032 A2) on 11 January (IR). **Maccoa Ducks** *Oxyura maccoa* are seldom reported from Hwange NP so a record from Guvalala Pan (1826 D3†) in May (J-MB) is a notable inclusion.

Raptors

Two separate **Secretarybirds** *Sagittarius serpentarius* were seen on 7 January (AMacD IR) on the Chivhu-Gutu road in the Widgeon Pan area (1930 B4), and another on the 22nd (MM). At Sango **Hooded Vultures** *Necrosyrtes monachus* were recorded in the 2032 A1† and 2032 A2† squares on 11-13 January (IR), and ten were in competition with approximately 180 **White-backed Vultures** *Gyps africanus* near Masuma Dam, Hwange NP (1826 C2) in April (J-MB). From one to three **Lappet-faced Vultures** *Torgos tracheliotos* were found in all three Sango squares, 2032 A1†, A2† and A4, between 8-12 January (IR).

Single **African Cuckoo Hawks** *Aviceda cuculoides* were at Hippo Pools (1731 B2) on 4 December (TN), Mazvikadei on 16 January (DK), and around Harare at Christon Bank (1731 C1) on 24 December (IR), Cleveland Dam (1731 C3) on 14 January (IL) and a juvenile at Monavale on 8 March (IR). A **Bat Hawk** *Macheiramphus alcinus* drank from a puddle at the Sidinda River, about 80 km downstream of Victoria Falls (1726 C3†), on 16 December (FW), two were at the Victoria Falls boat club on 17 March (DA) and one was on the same stretch of the Zambezi a few days later (IL), no less than three were at Chisipite, Harare (1731 C3) on 23 March (MH) and one was at Umguza on 5 May (JV).

Single **European Honey Buzzards** *Pernis apivorus* were at Mazvikadei (1730 A2†) on 29 December and 9 February (BM), Mukuvisi Woodlands on 4 February (DD), Katiyo, Honde Valley (1833 A3†), on 13 February (MS), near Chinhoyi (1730 A3†) on 15 February and 13 April (RB) and at Christon Bank on 21 March (TW) and 10 April (IR).

A **Black Eagle** *Aquila verreauxii* soared over White Horse Inn, Vumba (1932 B1), on 29 December (CB) and an adult and later a juvenile were at Sango (2030 A1) on 9 January and an immature on the 12th (IR). **Steppe Eagles** *A. nipalensis* were on Chamabonda vlei, Victoria Falls NP (1725 D3†) in December (CBr) and February (SL). In January about three **Lesser Spotted Eagles** *Clanga pomarina* were at Sango (2030 A1†), and in the neighbouring 2030 A2 square an impressive 200-300 at a termite emergence and in mopane woodland nearby were difficult to count accurately (IR). Single **Booted Eagles** *Hieraaetus pennatus** were south of Mutorashanga (1730 B1†) in late December (AMacD), at Umguza on 5 January (JV) and on Hillside golf course, Mutare (1932 B1†), on 4 March (GD).

A **Long-crested Eagle** *Lophaetus occipitallis* in the Shumba area (1826 C4†) in April (J-MB) is of note as they have a very limited range within Hwange NP. Individual **Martial Eagles** *Polemaetus bellicosus* were at Fothergill on 8 December (CM), Zambezi NP, Victoria Falls, on 27 December (NH), Sango (2030 A1) on 12 January (IR), Sanyati West on 19 February and a juvenile there on 27 February (CM). An **African Crowned Eagle** *Stephanoaetus coronatus* was displaying at Christon Bank on 15 April (IR).

Western Banded Snake Eagles *Circaetus cinerascens* were reported from Masoka (1630 A1) in early December (DS), Hippo Pools (1731 B2†) on 8 December (TN), Mazvikadei (1730 A2†) on 13 April (DK), Wamba marsh, Aberfoyle (1832 B4†), on 29 April (MS),

Chenje Camp, Chewore (1629 B2), on 11 May (MZ) and Tamarind Camp, Chirundu Safari Lodge (1628 B2), on 30 May (TAr). A male and a subadult **Bateleur** *Terathopius ecaudatus* were at Chamabonda vlei on 2 December (JV); two juveniles, two immatures, one female sub-adult, two adult males, two adult females and two unclassified were at various places on Sango between 7-12 January (IR); one was over the Victoria Falls-Kazungula road (1725 C4) on 1 February (JP), and two were at Masuma Dam on 2 February (JP).

Most **Steppe Buzzards** *Buteo buteo* normally depart in March but a late bird was at Fothergill on 15 May (CM). **African Goshawks** *Accipiter tachiro* visited a Newlands, Harare (1731 C3) garden (IR) in January, March and April, and at Hogerty Hill, Borrowdale (1731 C1), two juveniles were together on 8 and 12 January (CB JB). A **Pale Chanting Goshawk** *Melierax canorus* near the Gwaai River (1827 C3†) in May (KL) was some distance east of its normal range.

Single **Western Marsh Harriers** *Circus aeruginosus* were at Gletwyn Dam (JBa) and Marlborough vlei (RC) on 2 December, and The Hideaway on 28 January (KD). An **African Marsh Harrier** *C. ranivorus* was on Marlborough vlei on 21 December and twice in March, and an adult and a juvenile were there on 7 April (RC); one was at Kazungula on 11 February (SC). In January a **Montagu's Harrier** *C. pygargus* was 13 km north of Wigeon Pan (1930 B2) on the 7th (IR), two were nearby at Driefontein towards month end (JVe *et al*.) and one was on Glenara estates, Harare-Mazowe road (1730 D2), on the 14th (DA). A **Pallid Harrier** *C. macrourus* was on Marlborough vlei on 2 and 8 December, and 7 February (RC JM-B); in the eastern districts in the 1832 B4 square a pair was on the Pungwe Plains on 7 December (TW) and one on the Mare-Inyangani road on 9 February (EB). In January one was in Sanyati West bay on the 5th (CM) and three were at Widgeon Pan on the 28th (JVe *et al*.); in February a female was at Beatrice (1830 B4) (AD) and one in the Ngamo 1927 A2† square (AMacD) was a scarce Hwange NP sighting.

An **Osprey** *Pandion haliaetus* was at Kazungula on 10 December (CB) and two were there on 2 February (SC); one was on Karoi Dam (1629 D3†) on 21 December (DK); one at Sanyati West (1628 D1) on 6 January (JP) was followed by two there on 4 February (CM); one was on the Save River (2032 A2†) on 11 January (IR); more individuals were on the Zambezi at Old Ruckomechi Camp (1529 C3), downstream of Chirundu near Mongwe camp (1528 D4) and Jecha Point on 2 February (SW); and the last one reported was at Rhino Safari Camp, Matusadona (1628 C4), on 22 May (PTe).

A **Peregrine Falcon** *Falco peregrinus* was close to Hwange town (1826 C2†) early in December (AMacD). Three were active at Ngomakurira, Chinamora (1731 C1), on 22 April when a **Lanner Falcon** *F. biarmicus* was also present, and a **Peregrine** was at Newlands on 9 May (IR). A scarce **Taita Falcon** *F. fasciinucha* record is of two at the Chilojo cliffs, Gonarezhou (2132 A3†), on 27 April (TM). Three separate **Amur Falcon** *F. amurensis* flocks appeared at Kavinga in the Zambezi valley (1529 C4) on 8 December (GD) followed by about 200 at Tambahata Pan, Gonarezhou (2132 A4), on the 15th (TM). They were noted at Sango (2032 A1†) in January where no doubt overlooked during the Atlas years. A few **Lesser Kestrels** *F. naumanni* flew over Widgeon Pan on 7 January (IR) and some were in the Umfurudzi Safari Area (1731 B2†) in March (J-MB).

Gamebirds, Rails and Cranes

A **Swainson's Spurfowl** *Pternistis swainsonii* turned up in a Chisipite garden on 31 December. Single **Blue Quail** *Excalfactoria adansonii* were on the Pungwe Plains (1832 B4†) on 7 December and at The Hideaway (1730 D3†) on 28 January (TW). A **Kurrichane Buttonquail** *Turnix sylvaticus* was on Marlborough vlei on 2 December (RC). **Wattled Cranes** *Grus carunculatus* seen along the Chivhu-Gutu road numbered three at Shashe Dam, Driefontein (1930 B4), on 27 January (JVe *et al*.), two at Widgeon Pan on 8 March (CS) and a nice flock of over 20 on 24 April about 20 km south of Chivhu (1930 B2) (DK).

An **African Rail** *Rallus caerulescens* was at Mazvikadei (1730 A2†) in December (AMacD). **Corn Crakes** *Crex crex* in ones and twos were reported only from Harare at Marlborough vlei on 13 and 23 December (RC) and Monavale vlei on 4 February (TW) and 8 March (IR).

A **Buff-spotted Flufftail** *Sarothrura elegans* at Kavinga (1529 C4†) early in December was quite possibly a new Zambezi Valley record (GD) and one was heard at La Rochelle, Penhalonga (1832 D3), on 30 December (DS). A **Streaky-breasted Flufftail** *S. boehmi* was calling at Monavale vlei on 19 February (JM) and 15 March (RC) and an important record of the near-threatened **Striped Flufftail** *S. affinis* was one on the Pungwe Plains on 7 December (TW). This flufftail is known from only a few places on the eastern border.

22 **Purple Swamphens** *Porphyrio madagascariensis* were at The Hideaway on 28 January (KD). Single **Allen's Gallinules** *P. alleni* were at Cleveland Dam on 2 December (DD) and Greengrove on 17 February. A record from Shumba pans, Hwange NP (1826 C4†) early in April (J-MB) added another isolated area to its sparse Hwange NP distribution, and an adult and chick at Beatrice (1830 B4†) on 28 April (AD) were also at a new locality. A **Lesser Moorhen** *Gallinula angulata* was reported by various observers from Greengrove dam between 17 February and 11 March, one was at Ballantyne Park on 25 February (DD) and 2 April, and the last seen was at Beatrice on 28 April (AD).

Another open water specialist to abandon Aisleby was the **Red-knobbed Coot** *Fulica cristata* with numbers declining from only 30 in January to 9 in March and none thereafter (SM *et al*.); by contrast 356 were counted on Lake Manyame on 17 February (DR). Three **African Finfoot** *Podica senegalensis* were at Umfuli Creek, Chegutu, on 6 January (JW) and another was on the upper end of Mazvikadei (1730 A4†) on 21 January (BM).

Single **Kori Bustards** *Ardeotis kori* were in the Driefontein area (1930 B2) on 28 January (JVe *et al*.) and flying over the Umguza Irrigation Scheme on 3 March (JV). A **Denham's Bustard** *Neotis denhami* on Fothergill on 9 and 10 March and again on 15 May (CM) was probably from the Zambian population, small numbers of which can appear at that time of year (GD). At Sango (2032 A1†) a **Black-bellied Bustard** *Lissotis melanogaster* was noted on 12 January (IR).

Waders, Gulls and Terns

80 **African Jacana** *Actophilornis africanus* were at The Hideaway on 28 January (KD) and 62 were elsewhere on the lake on 17 February (DR). **Lesser Jacanas** *Microparra capensis* were on Widgeon Pan on 26 and 28 January (JVe *et al*.) and at Kazungula on 11 and 17 February (SC) where a male **Greater Painted Snipe** *Rostratula benghalensis* was seen on 11 December (CB). Other **Painted Snipe** reported were two at Blair dam, Harare (1731 C3), on 5 December and 22 January and three females there on 20 December (DD), one at Lukosi Camp on 7 December (ST) and singles at three different Sango pans in January (IR).

Four **Common Ringed Plovers** *Charadrius hiaticula* were at the Lake Chivero Bird Sanctuary on 14 January (RD) and one at Kuimba Shiri three days later (TC). Eight **Senegal Lapwings** *Vanellus lugubris* were on Senuko Ranch, Save Valley Conservancy, on 21 January (CS). Single **Long-toed Lapwings** *V. crassirostris* were at Kazungula on 10 December (CB) and The Hideaway on 28 January (JP). Single **Green Sandpipers** *Tringa ochropus* were at Kavinga (1529 C4†) early in December (GD) and Victoria Falls in mid-month (CBr). The only **Sanderling** *Calidris alba* reported was at Tiger Safaris, Chirundu (1628 B2), on 4 December (GD).

About ten **African Snipe** *Gallinago nigripennis* were drumming at Komani vlei, north of Harare (1730 D2), on 11 April (IR). An exceptional record is a **Eurasian Curlew** *Numenius arquata** photographed at Sentinel Ranch, Beit Bridge (2229 A2†), on 27 January (JC).

Pied Avocets *Recurvirostra avosetta* were reported from Chamabonda vlei in December (CBr), an unusual locality, and on Lake Chivero where six were at the Sanctuary on 14 January (RD) and 12 at Kuimba Shiri on the 27th (TC). The David Whitehead ponds, Chegutu (1830 A1), were largely dry in February and just a single bird was seen on the 10th (IR). None were reported from Aisleby where just two **Black-winged Stilt** *Himantopus himantopus* were present in December and January, and the 29 there in February soon dispersed with none noted after that (SM *et al*.). A **Stilt** record from Mandavu (1826 C2†) in December (SL) has highlighted the scarcity of records from a dam that would seem to suit this wader.

A surprise visitor at the Mukuvisi Woodlands on 3 December was a **Bronze-winged Courser** *Rhinoptilus chalcopterus*; one was found at Sango (2032 A1†) on 7 January (IR) and another hawked insects under lights at 4 a.m. on 27 January in a Philadelphia, Borrowdale, garden (KvL).

Two **Collared Pratincoles** *Glareola pratincola* were at the Lake Chivero Sanctuary on 14 January (RD) and an adult **Rock Pratincole** *G. nuchalis* with a fledged chick was at Victoria Falls on 12 December (CB). Northbound movement of **Black-winged Pratincoles** *G. nordmanni* was reported from mid-January onwards at Chamabonda vlei (1725 D3†) on the 14th and 21st (SL MA), and at Beatrice (1830 B4†) on the 18th (AD) where far to the east of normal passage; seven were at Umguza on the 27th (JV) and the last seen were in the Ngamo square (1927 A2†) in mid-February (AMacD).

Lesser Black-backed Gulls *Larus fuscus* were at Victoria Falls (1725 C4†) in January (CBr) and Chilo Gorge Safari Lodge (2132 A2†) on 15 May (TM). Added to the record in Part 1, three sightings of this scarce vagrant in one year is exceptional. 120 **Grey-headed Gulls** *Chroicocephalus cirrocephalus* were at the Lake Chivero Sanctuary on 14 January (RD) and there were 68 at The Hideaway two weeks later (KD). A pair of **Whiskered Terns** *Chlidonias hybrida* in breeding plumage was near Kuimba Shiri on 22 February (TC). **White-winged Terns** *C. leucopterus* in their hundreds flew west near Kings Camp, Lake Kariba (1628 D1), at dusk on 14 December (SE) and 208 were on Lake Manyame on 28 January (KD).

In December two adult and two juvenile **African Skimmers** *Rynchops flavirostris* were upstream of Victoria Falls (DK), *c*. 12 adults and nine juveniles were at Kazungula (CB) and a wanderer on Wamba Dam, Aberfoyle (1832 B4†) (MS) was way out of range; three were at Chilo Gorge Safari Lodge on 29 May (TM).

Other non-Passerines

In December **Speckled Pigeons** *Columba guinea* appeared at the Deka Safari Area (1826 C2†) (AMacD), another new locality in the northwest, and an **African Mourning Dove** *Streptopelia decipiens* was heard near Kazungula on 11 December (CB). Three or more **Grey-headed Parrots** *Poicephalus fuscicollis* were over Komani on 6 December (KW), some were heard at Sango (2032 A1) on 9 January with a group of three seen the next day (IR). In Hwange NP two were on the Shumba-Tchompani road (1826 C4) on 17 April and three at Sinamatella (1826 C2), on 22 May (J-MB); at Tambahata Pan six to eight were around on 29 April and 14 May (TM).

A **Common Cuckoo** *Cuculus canorus* was at Sango (2032 A1†) on 9 January (IR) while a hepatic bird at Christon Bank on 16 April (TW) was late in departing. Another end of season record was a **Great Spotted Cuckoo** *Clamator glandarius* being fed by **Meves's Starlings** *Lamprotornis mevesii* at Chilo Gorge Safari Lodge on 30 April (TM). **Thick-billed Cuckoos** *Pachycoccyx audeberti* were reported from Masoka in early December (DS), Hippo Pools twice in December and 27 May (TN) and Sango (2032 A1†) on 9 January (IR). A **Klaas's Cuckoo** *Chrysococcyx klaas* at Christon Bank on 26 May (IL) was probably a newly-arrived South African bird. Most unusual was a **Senegal Coucal** *Centropus senegalensis* on the Vumba (1932 B2†) in December (J-MB).

Grass Owls *Tyto capensis* are now infrequently reported so a pair at Komani on 25 February (AM) is worth noting. **Marsh Owls** *Asio capensis* in unusual areas were at David Whitehead ponds, Chegutu, on 10 February (IR), near Masuma (1826 C4†) in April (J-MB) which is further west in Hwange NP than expected, and at Umguza (1928 C2†) in May (JV) thus adding a new square to their patchy distribution north of Bulawayo. Also settling in new areas, **African Barred Owlets** *Glaucidium capense* were in the Mpopoma 2028 C2† square in January (LW) and in the Ngamo area (1927 A2†) in February (AMacD). A **Verreaux's Eagle Owl** *Bubo lacteus* was north and east of its known range when noted at Umguza (1928 C2†) in May (JV).

African Black Swifts *Apus barbatus* in two Sango squares, (2032 A1) and (2032 A2†), on 10 and 11 January had presumably ranged from the Chipinge mountains to the east. It is likely similar westward movement brought *c*. 15 **Horus Swifts** *A. horus* to Sango (2032 A1†) on the 10th (IR).

A January **Narina Trogon** *Apaloderma narina* record from the Chamabonda vlei area (1725 D3†) (CBr) is significant as the Atlas contains no records from along the upper Zambezi border region. They were also recorded in January at Sango (2032 A1†) as was an **African Pygmy Kingfisher** *Ispidina picta* (IR). A **Woodland Kingfisher** *Halcyon senegalensis* at Staley Dam, Harare (1731 C3), on 24 March (TW) and nearby at Ballantyne Park on 14 April (IL) may have been the same bird although it is unusual for this species to linger that long whilst moving north; the last reported were two near Massasanya dam, Gonarezhou (2131 B4), on 1 May (MD). A **Brown-hooded Kingfisher** *H. albiventris* near Shumba (1826 C4†) in May (J-MB) was south of its known range in Hwange NP.

Large **European Bee-eater** *Merops apiaster* flocks heading north were over Harare on 20 March (TC), Musango (1628 C4) on 3 April (SE) and Fothergill two days later (CM); the last ones reported were at Aisleby on 14 April (SM *et al*.) and over Hogerty Hill on the 21st (JB). Five **Olive Bee-eaters** *M. superciliosus* at Victoria Falls between 20 and 25 March (IL) were from the small population that breeds in the extreme northwest. **Blue-cheeked Bee-eaters** *M. persicus* were at Kazungula on 11 December (CB) and Sango (2032 A2†) on 8 January (IR).

Two **Southern Carmine Bee-eaters** *M. nubicoides* heading south at Blair Park on 15 December (KD) were post-breeding birds and a flock of about 15 at Ruwa (1731 C4) on 31 March were returning north (IL); late departing birds were at Trichilia Camp, Mana Pools (1529 C4), on 2 May (TAr). An exceptional **Swallow-tailed Bee-eater** *M. hirundineus* record from near Mazunga (2129 D4†) in May (WG) involved wanderers either from Botswana or from our own population to the north. Either possibility indicates movement of some distance.

At least 15 migrating **European Rollers** *Coracias garrulus* flew below low clouds at Mutare on 9 April (GD). The Atlas holds no **Crowned Hornbill** *Tockus alboterminatus* records south of 19°S in Hwange NP but they were noted in the Ngamo square (1927 A2†) in February (AMacD). **Brown-backed Honeybirds** *Prodotiscus regulus* were south of Hwange town (1826 C2) (AMacD) and at Christon Bank (IR) in December, near Sinamatella (1826 C2) in February (SL) and at Hogerty Hill in April (CB). Single **Green-backed Honeybirds** *P. zambesiae* were at Mandara, Harare (1731 C3), in March (JBa) and the Mukuvisi in April, while at Christon Bank one or two were seen in December, April and May (IR).

Passerines

African Broadbills *Smithornis capensis* were at La Rochelle on 30 December (DS), at the Sidinda River downstream of Victoria Falls (1726 C3†) on 4 April (FW) and near Chinhoyi (1730 A3†) on 13 April (RB). Various observers reported **African Pittas** *Pitta angolensis* at the prime sites of Masoka and Lukosi in December, and two nestlings were seen at Masoka early in February (MZ). 11 sightings were made over five days at Kavinga (1529 C4†) in early December (GD).

On 7 January **Melodious Larks** *Mirafra cheniana* were displaying at Widgeon Pan, probably the best (or only) place to find them these days (IR). **Dusky Larks** *Pinarocorys nigricans* returning north were at Lukosi Camp on 7 December (ST) and Hwange Safari Lodge (1826 C4) the following day (CB JB). Movement south through the country tends to be more staggered with records this year stretching from 21 March to 21 May at Sanyati West, Fothergill (CM), near Shumba (1826 C4†) (JM-B), and Haka Park, Harare (1731 C3) (DD). **Red-capped Larks** *Calandrella cinerea* north of Bulawayo (1928 D3†) early in May (KL) represent slight range expansion from the south.

A pair of **Blue Swallows** *Hirundo atrocaerulea* nested on a building at the Mtarazi Falls, Nyanga (1832 B4), early in December, and 33 were seen in the area over two days in the last week of January (MS). **Wire-tailed Swallows** *H. smithii* have extended their range onto the Vumba (1932 B2†) where they were seen in December and January (J-MB).

Mosque Swallows *Cecropis senegalensis*, **House Martins** *Delichon urbicum* and **Brown-throated Martins** *Riparia paludicola* recorded at Sango (2032 A1†) between 9 and 11 January were probably overlooked there during the Atlas years; the **Mosque Swallows** were collecting mud for nesting (IR). The last **House Martins** reported from Harare were at Art Farm, Harare (1731 C1), on 14 April (CB) and a large departing flock of 70 was at Charara, Kariba

(1628 D2), on the 19th (DK). Two **Sand Martins** *Riparia riparia* were at the Lake Chivero Sanctuary on 14 January (RD) and **Brown-throated Martins** in the Shumba area (1826 C4†) in April (J-MB) were a little south of their usual range in the park. Two **Black Saw-wings** *Psalidoprocne holomelas* at the Victoria Falls sewage ponds (1725 D4†) on 24 March (IL) were likely to be wanderers from the northern Botswana population.

Eurasian Golden Orioles *Oriolus oriolus* were particularly common at Sango during the January visit (IR). Several **Hartlaub's Babbler** *Turdoides hartlaubii* flocks were seen at Kazungula on 10-11 December (CB JB). A **Familiar Chat** *Oenanthe familiaris* was seen twice in May at Msasa, Harare (1731 C3†) (CB). Following the November **Mocking Chat** *Thamnolaea cinnamomeiventris* record from the Shumba area (1826 C4†) they were also noted there in April (J-MB). An **African Stonechat** *Saxicola torquatus* at Aisleby on 10 March (SM *et al*.) was the first seen there for nearly five years.

A **Thrush Nightingale** *Luscinia luscinia* on a Beatrice farm (1830 B4) on 3 December (AD) had arrived a little earlier than usual; they were recorded six times from 11-13 January at Sango in the 2032 A1† and A2† squares (IR); one was at the Lake Chivero Sanctuary on 14 January (RD) and another at Crowborough on 17 March (TW IL). One near the top of Ngomakurira on 22 April (IR) was unusual for its location and the extremely late departure date, both of which indicate it was passing through. The same applies to **Whitethroats** *Sylvia communis* at Mazvikadei (1730 A2†) on 13 April (DK) and on the Shumba-Tchompani road, Hwange NP (1826 D1†) on 17 April (J-MB), late dates indeed.

A **Garden Warbler** *Sylvia borin* at Lions Head dam, 45 km peg Harare-Shamva road (1731 C2†) on 6 January was further east than expected (CB). **Icterine Warblers** *Hippolais icterina* were at Chisipite on 19 January (TW) and Monavale vlei on 18 February (RD), and one on the Main Camp-Shumba road (1826 C4†) on 8 April (JM-B) was probably heading north. Two exceptional records are of one, possibly two **River Warblers** *Locustella fluviatilis** calling at Chisipite (1731 C3†) on 16 February (TW) and a **Basra Reed Warbler** *Acrocephalus griseldis** in the Zambezi Valley at Kavinga (1529 C4†) early in December (GD). Both warblers are poorly known in southern Africa. A **Marsh Warbler** *A. palustris* was in a Newlands garden for a few days at the end of March (IR) and in the same month one was found in the Umfurudzi (1731 B2†) (J-MB); its distribution east of 31°E in the northeast is very scattered.

The only **Broad-tailed Warbler** *Schoenicola brevirostris* reported was in riverine grass at Chimanimani (1932 D4) on 28 December (JP). In the southeast, **Stierling's Wren-warblers** *Calamonastes stierlingi* have moved north since the Atlas years being found at Sango (2032 A1†) on 10 January (IR). **Desert Cisticolas** *Cisticola aridulus* displayed conspicuously at Widgeon Pan on 7 January (IR) and a **Pale-crowned Cisticola** *C. cinnamomeus* was on Monavale vlei on 15 December (JM). **Croaking Cisticolas** *C. natalensis* in new areas were in the Felixburg square 1930 B4† on 7 January (IR) probably having moved from the north, and in the Shumba area (1826 C4†) in April (J-MB).

A **Dusky Flycatcher** *Muscicapa adusta* was at Christon Bank on 22 December (IR) and an **Ashy Flycatcher** *M. caerulescens* was an unusual sighting at Umguza (1928 C2†) in May (JV). Two **Collared Flycatchers** *Ficedula albicollis* were at Hidden Rocks, Juliasdale (1832 B3†) on 8 December (TW) and they were prominent at Christon Bank between 22 December and 9 January (IR TW J-MB). **Grey Tit-Flycatchers** *Myioparus plumbeus* were seen at this site twice in December and on 15 April, and were noted at Sango on 10 January (IR). Two **Livingstone's Flycatchers** *Erythrocercus livingstonei* in Zambezi NP, Victoria Falls (1725 D4†), on 27 December (NH) were some distance out of range according to the Atlas but they visit occasionally once cooler conditions set in with the rains (DT).

Three **Yellow Wagtails** *Motacilla flava* were at the Victoria Falls sewage ponds on 3 December (JV), at least 20 were on the Zambezi floodplain near Kazungula on 11 December (CB) and more spectacularly several hundred arrived to roost at Gletwyn dam on 19 February. A **Buffy Pipit** *Anthus vaalensis* was in the Umfurudzi Safari Area (1731 B2†) in March (JM-B) and a **Tree Pipit** *A. trivialis* at Christon Bank on 26 May (IL) was extremely late. At least six **Rosy-throated Longclaws** *Macronyx ameliae* were at Widgeon Pan on 7 January (IR).

Four southbound **Lesser Grey Shrikes** *Lanius minor* were on the Fothergill shoreline on 8 December (CM) and returning birds noted in April were at Komani on the 11th (IR), Aisleby on the 14th (SM *et al*.) and at Haka Park on the 28th (DD). **Red-backed Shrikes** *L. collurio* were present at Aisleby throughout the summer up to 14 April (SM *et al*.) when also last seen at Art Farm. A **Common Myna** *Acridotheres tristis* was just inside Zimbabwe on the Botswana border at Kazungula (1725 C4†) on 11 December (CB) and a flock of *c.* 40 was at David Whitehead primary school, Chegutu (1830 A1†) on 10 February (IR).

Greater Blue-eared Starlings *Lamprotornis chalybaeus* in QDS 1529 C4† at Mana Pools in April (JR) represent a slight movement eastwards since the Atlas years. While **Miombo Blue-eared Starlings** *L. elisabeth* are seen regularly at the Mukuvisi Woodlands they numbered an impressive 60 on 8 March. **Yellow-billed Oxpeckers** *Buphagus africanus* were reasonably common at Sango (2032 A1†) in January (IR) and denoted an extension of their southeast lowveld range. Also in new territory were **Red-billed Oxpeckers** *B. erythrorynchus* near the Lion and Elephant motel, Bubye River (2130 C1†), during April (WG).

An **Amethyst Sunbird** *Chalcomitra amethystina* was on the Main Camp-Shumba road (1826 C4†) on 8 April (JM-B) and a male **Western Violet-backed Sunbird** *Anthreptes longuemarei* was near Wild Geese Lodge on 7 April (CB). In the Save Valley Conservancy in January **Scaly-feathered Finches** *Sporopipes squamifrons* were at Sango (2032 A1†) (IR) and Senuko Ranch (CS) indicating slight movement from the northwest. A **Southern Brown-throated Weaver** *Ploceus xanthopterus* was at Kazungula on 11 December (CB).

A flock of about 25 **Cuckoo Finches** *Anomalospiza imberbis* was seen on the Chivhu-Gutu road (1930 B2) on 7 January where it was only sparsely recorded previously, while at Widgeon Pan a similar sized flock of **Yellow-crowned Bishops** *Euplectes afer* (IR) is an excellent record of a species that only spasmodically visits the eastern side of the country. An **Orange-winged Pytilia** *Pytilia afra* turned up at Haka Park (1731 C3†) on 9 February (J-MB) and a Mana Pools NP (1529 C4†) record in April (JR) indicates slight movement from the west. **Red-throated Twinspots** *Hypargos niveoguttatus* near Hwange town (1826 C2†) in December (AMacD) places them much further west than previously reported. Some were heard near the Mazowe at Christon Bank on 10 April (IR).

Magpie Mannikins *Lonchura fringilloides* have moved south since the Atlas years to be found southeast of Beatrice (1830 B4†) in January (LW); one appeared in Highlands, Harare (1731 C3) on 5 May (IM). A **Shaft-tailed Whydah** *Vidua regia* at Sango (2032 A1†) on 8 January was a surprising record (IR) and seems to indicate movement from the northwest. There was a spate of records in the late 1990s from near Mutare so its status east of 32° in this sector is by no means clear. At the opposite end of the country another wanderer was a **Broad-tailed Paradise Whydah** *V. obtusa* near Shumba (1826 C4†) in April (J-MB). **Zambezi Indigobirds** *V. codringtoni* are now consistently found in the Burma Valley (1932 B2), the latest record occurring on 18 March (BMb).

Arrivals

African Crake *Crecopsis egregia* 15 December Monavale vlei (JM), 27 December Zambezi NP, Victoria Falls (NH); **Capped Wheatear** *Oenanthe pileata* 14 April Aisleby; **Great Reed Warbler** *Acrocephalus arundinaceus* 9 December Aisleby (SM *et al*.), 15 December Monavale vlei (JM); **Purple-banded Sunbird** *Cinnyris bifasciatus* 25 May Crowborough (IL).

Departures

Eurasian Hobby *Falco subbuteo* 1 April Mare Dam, Nyanga; **Amur Falcon** 14 April Art Farm (CB); **Wood Sandpiper** *Tringa glareola* 14 April Aisleby (SM *et al*.); **Levaillant's Cuckoo** *Clamator levaillantii* 13 May Harare (PT); **Diderick Cuckoo** *Chrysococcyx caprius* 10 March Aisleby (SM *et al*.); **Black Coucal** *Centropus grillii* 26 April Marlborough vlei (RC); **Grey-headed Kingfisher** *Halcyon leucocephala* 18 April Aberfoyle (CW); **Barn Swallow** *Hirundo rustica* 22 April Ngomakurira (IR), 5 May Aisleby (SM *et al*.); **White-throated Swallow** *H. albigularis* 26 April Marlborough ponds (RC);

Garden Warbler 6 April Vumba (KW); **Spotted Flycatcher** *Muscicapa striata* 7 April Teviotdale (CB); **African Paradise Flycatcher** *Terpsiphone viridis* 12 May Hogerty Hill (JB CB), 20 May Musango (SE); **Violet-backed Starling** *Cinnyricinclus leucogaster* 25 May Hogerty Hill; **Purple-banded Sunbird** 2 December Lions Head dam (1731 B3†), 12 December Victoria Falls (CB).

Observers

DA – Derek Adams; TAr – Tessa Arkwright; MA – Matt Austen; EB – Elspeth Baillie; RB – Rachel Bain; CB – Colin Baker; JB – Julia Baker; JBa – James Ball; MBe – Miriam Bell; J-MB – Jean-Michel Blake; J&JB – John & Jenny Brebner; GB – Gary Brent; CBr – Charles Brightman; MB – Mark Brightman; RC – Ronnie Chirimuta; SC – Stan Chizipi; JC – Jane Clegg; FC – Ferdie Couto; TC – Tracey Couto; DD – D Dalziel; AD – Asher Dare; MD – Mo Davey; ND – Neil Deacon; CD – Carolyn Dennison; RD – Richard Dennison; KD – Ken Dixon; GD – Gary Douglas; SE – Steve Edwards; DE – David Ewbank; NF – Neil Fairlie; JoF – Jonathan Francis; AF – Ant Fynn; WG – Wesley Gush; MH – Mark Hadingham; SH – Sean Hind; CH – Clive Harris; NH – Nkululeko Hlongwane; CJ – Courtney Johnson; DK – Doug Kok; RK – Rebecca Kilner; KL – Karen Learmonth; HL-Helen Lewis; SL – Stephen Long; IL – Innes Louw; AMacD – Ali MacDonald; RMacD – Roger MacDonald; IM – Innocent Magunje; AM – Alex Masterson; SMa – Stuart Mattinson; SM – Sandy McAdam; NM – Norman Mellett; CM – Cliffy Mhandu; BM – Bev Morgan; SMu – Sally Mucklow; KM – Kennedy Mukucha; MM – Matt Munro; BMb – Buluwesi Murambiwa; JM – Jimmy Muropa; TM – Thomas Mutombeni; TN – Tadious Ndadziira; SN – Sean Nicolle; JP – Julia Pierini; GP – Gordon Putterill; SR – Shameer Ranchod; JR – John Randell; RR – Rob Rees; IR – Ian Riddell; DR – Di Rushforth; MS – Morgan Saineti; CS – Clive Stockil; DS – Debbie Swales; PT – Pete Taylor; PTe – Peter Tetlow; DT – Darryl Tiran; ST – Shaun Torr; AT – Arnold Tshipa; EvdW – Elsabe van der Westhuizen; KvL – Karl van Laeren; PvN – Pat van Niekerk; JV – James Varden; JVe – John Vekris; DoW – Dorothy Wakeling; JW – Johnny Whitfield; DeW – Debbie Wiggins; CW – Carl Wilson; LW – Luke Wilson; TW – Tony Wood; FW – Forest Worsley; KW – Ken Worsley; SW – Sue Worsley; KWr – Karl Wright; MZ – MacKenzie Zirota.

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Records of Yellow-billed and Black Kites: August to March 2018

C.T. Baker

Yellow-billed Kite *Milvus aegyptius* records submitted for inclusion in Field Observations and sightings drawn from elsewhere are shown separately here.

No July records were received this year and sightings tailed off towards the end of March. Flocks of 'hundreds' were reported from Hwange NP at Ngamo and Guvalala and may have moved in from Botswana, but otherwise few groups of any significance were noted. Breeding activity was mentioned only once with a newly-arrived pair building a nest at Victoria Falls in mid-August. Given the number of visitors to Lake Kariba and Mana Pools NP, not to mention safari staff who reside there, surprisingly few records come from those areas.

The sightings shown below are of single birds except where noted otherwise.

9 August	Gwebi River bridge, Harare-Banket road (1730 D1) BM
10-12 August	A pair collecting nesting material at Victoria Falls (1725 D4) DT
12 August	Headlands (1832 A3) JP Makuti (1629 A3) SW
15 August	Near Nyamepi, Mana Pools (1529 C2) IL On the Chirundu-Harare road: 10 km after Makuti (1629 A4) and 20 km before Karoi (1629 D1) IL
18 August	Acacia Point, Mana Pools (1529 C4) J-MB
19 August	Kennedy 2 Pan, Hwange NP (1827 C3) SH
20 August	Elephant Walk, Karoi (1629 D1) SW Mana Pools NP Office (1529 C4) TA
21 August	Just south of Gutu (1931 C1) CH
24 August	Hippo Pools (1731 B2) TN Hwange Town (1826 B3) SH
2 September	Two at Aisleby, Bulawayo (2028 B1) SM
6 September	Two in Sanyati Gorge, Lake Kariba (16278 D4) CM
9 September	Ingwe Pan, Mana Pools (1529 C4) IR
14 September	Three upstream of Victoria Falls (1725 D4) CB Victoria Falls town (1725 D4) CB
15 September	Hwange NP: Two at Guvalala Pan (1826 D3), Livingi Pan (1826 D2), two at Nyamandhlovu Pan (1826 D4), two at Makwa 1 Pan (1827 C3), two at Hwange Safari Lodge (1826 D2) CB
16 September	Two at Hwange Main Camp (1826 D2) CB Three at Hwange Safari Lodge (1826 D2) CB Two 20 km south of Hwange (1826 B3) CB Hwange town (1826 B3) CB
17 September	Four over Victoria Falls town (1725 D4) CB
24 September	Near Bromley (1831 A2) IR Tsindi Ruins, Marondera (1831 B1) IR
26 September	Three at Victoria Falls airport (1825 B2) MZ Hwange Colliery number 3 dam (1826 A4) FW
30 September	71 km peg Harare-Banket road (1730 B3) IL
1 October	Five near Lion's Den (1730 A3) PT
4 October	Nine at a fire on the Hwange Colliery boundary (1826 A4) FW
7 October	Gweru (1929 B4) IL Heany, Bulawayo (2028 B2) IL
8 October	Bulawayo-Harare road: Daisyfield, 60km before Gweru (1929 C2), 20 km after Gweru towards Kwekwe (1929 B4) IL
4 November	Monavale vlei, Harare (1731 C3) JM
6 November	Mukuvisi Woodlands, Harare (1731 C3) KW
9 November	Airport road, Harare (1731 C3) TW
12 November	Hundreds in the Ngamo area, Hwange NP (1927 A2) RR
5 December	Three on Chamabonda vlei, Victoria Falls (1725 D3) CB
7 December	Two near Victoria Falls Safari Lodge (1725 D4) CB
8 December	Vic Falls-Hwange NP road: 24 km peg near Victoria Falls airport (1825 B2), 63 km peg (1826 A3), 87 km peg (1826 A4), 117 km peg (1826 B3), 7 km from Hwange Safari Lodge (1826 D2) CB
8 December	Up to 15 at Hwange Safari Lodge (1826 D2) CB
9 December	Five at Hwange Safari Lodge (1826 D2) CB Near Hwange Main Camp (1826 D2) CB Aisleby, Bulawayo (2028 B1) SM
11 December	Near Kazungula (1725 C4) CB
12 December	Three on the Zambezi above Victoria Falls (1725 D4) CB
17 December	Several hundred at Guvalala Pan, Hwange NP (1826 D3) JV
18 December	Lupane (1827 D4) NH
29 December	Rusape-Mutare road: 16 km after Rusape (1832 C1), 53 km after Rusape (1832 C4) CB
1 January	15 km before Rusape on road from Mutare (1832 C1) CB
4 January	Marondera (1831 B1) DS
6 January	Four at Aisleby, Bulawayo (2028 B1) SM
7 January	Chivhu-Gutu road: QDS 1930 B2, three in QDS 1930 B4, two in QDS 1931 C1 IR Masvingo-Birchenough road: four at Nyika (1931 D3), QDS 2031 A2 IR
8 January	Sango, Save Valley Conservancy (2032 A4) IR
28 January	Lake Manyame (1730 D3) KD Widgeon Pan, Chivhu-Gutu road (1930 B4) JVe
29 January	Near Silobela (1829 C3) JP
3 February	Five at Crowborough ponds, Harare South (1730 D4) IL
4 February	Selous (1830 A2) JW 50 km along Harare-Bulawayo road (1730 D3) JW Beatrice (1830 B4) (**Black Kite** *Milvus migrans*) AD
7 February	Art farm, Harare (1731 C1) (**Black Kite**) JW
3 March	Three at Sanyati West, Lake Kariba (1628 D1) CM Twelve on Fothergill shoreline, Lake Kariba (1628 D1) CM
4 March	Surrey abattoir, Bromley (1831 A2) IL
21 March	Somabhula area, Gweru-Bulawayo road (1929 D1) DS
24 March	Victoria Falls sewage ponds (1725 D4) (**Black Kite**) IL

Observers

TA – Tessa Arkwright; CB – Colin Baker; J-MB – Jean-Michel Blake; AD – Asher Dare; KD – Ken Dixon; CH – Clive Harris; NH – Nkululeko Hlongwane; SH – Sean Hind; IL – Innes Louw; SM – Sandy McAdam *et al.*; CM – Cliffy Mhandu; BM – Bev Morgan; JM – Jimmy Moropa; TN – Tadious Ndadziira; JP – Julia Pierini; RR – Rob Rees; IR – Ian Riddell; DS – Debbie Swales; PT – Peter Tetlow; DT – Daryl Tiran; JV – James Varden; JVe – John Vekris *et al.*; JW – Johnny Whitfield; TW – Tony Wood; FW – Forest Worsley; KW – Ken Worsley; SW – Sue Worsley; MZ – MacKenzie Zirota

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Notes from Eastern Zimbabwe

Black-shouldered Kites

On 5 July 2017 in the same area west of Mutare I observed what I thought to be two falcons flying at great speed in a tail chase. As I was in an area with strict security, I was not allowed to have binoculars, so I was unable to confirm their identity. On the 6th the birds appeared again at about 1000 hrs, but this time there were three of them, one of which was hovering at a great height, which seemed unusual since one is accustomed to seeing hunting birds paddling the air a few metres above the ground. The uppermost bird was apparently displaying. The other two birds were flying fast, in a wide circle, looking like falcons. Suddenly, the top bird went into a striking high-speed stoop, and on levelling out made talon contact with a lower bird, which turned to greet it. It was only a touch, not a grip with gyrations like larger raptors, but there was definite contact and it was unexpected. I was then able to identify the birds, which proved to be Black-shouldered Kites *Elanus caeruleus*.

Crowned Eagle

On 5 July, opposite the mountain Chinyamntangira on the Christmas Pass range, on the road to Feruka farm, an adult Crowned Eagle *Stephanoaetus coronatus* was seen gliding across the road. It settled in a tree 30 m away at a height of 3 m. There is a known breeding pair about 15 km away in the Vumba and this could have been one of that pair. On the other hand, up to the mid-1980s a breeding pair lived immediately above the suburb of Murambi, in Mutare. Ron Hartley reported on these and in particular referred to their breeding regularity. There is an abundance of large trees on the aforementioned mountain and its lower slopes as well as an abundance of prey, such as Vervet Monkeys, scrub hares and small antelope. Most of the mountain and its surroundings are in a protected zone, and is relatively undisturbed, which makes one optimistic about the possible presence of a breeding pair on the western part of the range.

Nightjars

From 16 March to 5 October 2017, I was employed at intervals, at a location some 10 km west of Mutare. The topography there is generally flat, lying between the Christmas Pass range to the north and the end of the Dangamvura ridge to the south. About 50 ha had been cleared for farming in the past but it is now maintained as short grassland by constant mowing, for fire protection, by the management of the light industry centred in the clearing. The surrounding vegetation is mainly acacia regrowth following its previously heavy deforestation. A narrow belt of acacia and tall grasses remains on the northern edge adjacent to the railway line. My duties required me to be there at night as well as by day.

Square-tailed (Mozambique) Nightjars *Caprimulgus fossii*, were found in this area and during the night they made use of the insects attracted to the bright yellow and orange lighting surrounding the industrial sites. They evidently returned to the belt of trees and grass before dawn. Fiery-necked Nightjars *C. pectoralis* were heard calling in the surrounding bush for a short period in April and again in August but were not seen entering the illuminated area.

The Square-tailed Nightjars generally arrived at about 1830 hrs from beyond the railway line and began calling with a rapid "*whichee-shoow*" repeated two or three times before breaking into the longer "*churr*" with its change in pitch. They would settle close to where I was parked on a dirt road 100 m away from the ring of lights around the security fence. From there they would fly to the tarmac surface underneath the lights to prey on the insects attracted to them. These were taken with a sudden upward flight, from a settled position, up to about 10 m above the ground followed by an immediate return to their starting point. This was done at frequent intervals. They also flew strongly, hawking insects above the buildings, negotiating the high fences with ease. The birds were habituated to the heavy slow-moving vehicles entering and leaving the enclosure and as it was well illuminated they were unaffected by the vehicles' headlamps. On one occasion with headlights off, I was able to approach a settled bird to within 1 metre, and when I was alongside it, the bird chose to shuffle side-ways, rather than take flight. Without visual aids it would not have been easy to identify them by plumage alone, but from close up the white tips to the secondary flight feathers, and those of the coverts were clearly visible. If approached on foot they flushed emitting soft rapid sounds.

It was difficult to ascertain how many nightjars frequented the area, which had an illuminated perimeter of about 2400 m, but two pairs were seen to dominate distinct positions 400 m apart. The locality here is at an altitude of 1000-1100 m and the birds were present right through the winter and they were active, and even calling, on the coldest and wettest of nights. This tends to contradict Irwin (1981. *Birds of Zimbabwe*, p. 178) who suggested that they became very scarce from May to November. They were present and active at the site until the first week in September, when one of each of the pairs under observation departed and by the third week the remaining bird also disappeared. This seems to be similar to the Pennant-winged Nightjar *Macrodipteryx vexillarius* where males arrive before the females to establish a territory (Steyn, 1996. *Nesting birds*. Fernwood Press, p. 115). As the breeding season approaches, and the birds prepare to migrate to lower altitudes the prevalence of strong winds, especially at night, may interfere with the flight of insects and the ability of the nightjars to catch their prey.

Golden Weaver

On 24 March 2016, in the Murambi Gardens, Mutare, a male Golden Weaver *Ploceus xanthops* was seen making a nest in a young palm *Phoenix reclinata* at a height of about 5 m (Figure 1). This was the first of six, all in the same palm tree, the final being built in the last week of July. None of the nests were completed to the stage where there was a veranda and short downward facing entrance and they were not lined. In some cases, material from a previous nest was used, and in other instances an old nest was given fresh attachments. The stripping of the palm fronds was seen to be a laborious process for the male, as the weaver takes broad strands that require more effort to remove from the stem at the base. This is unlike the Spectacled Weaver *P. ocularis*, which removes very fine strips. The Golden Weaver's action appears to damage the palm fronds, which, having been severely stripped, appear to lose their tensile strength thus drooping so much that it would be unsafe to attach any nests.

The female was seen to be present but did not take any part in nest-building. At the end of July, the pair moved to the garden of a neighbour where the male chose the strong frond of a bougainvillea in which to build a nest. By comparison with other weavers, the nest is untidy, but the birds did not strip the bougainvillea frond completely, but incorporated some of the flowers into the nest, an embellishment giving it an aesthetic touch. The nest was then lined, probably by the female. This was followed by a further nest shown to have been completed in the third week of August. The palm tree was later removed from the Murambi Garden, but in 2017 the pair carried out the same procedure with the same timings in the neighbour's palm tree before once again choosing the bougainvillea frond, which was stronger and gave more height.

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Figure 1. (a) The male Golden Weaver building a nest in a palm frond, female in attendance; (b) completed nests in palm fronds, note that the palm fronds have not been fully stripped; (c) completed nest on bougainvillea stems, note that they have been stripped except for some flowers around the nest; another nest with bougainvillea flowers incorporated into it.
Photos (c) Rob Truscott.

A Slaty Egret at Mazvikadei Dam

The Slaty Egret *Egretta vinaceigula* occurs mainly in the Okavango-Chobe area but in Zimbabwe it only occurs regularly at Kazungula and the Zambezi above Victoria Falls (Marshall, 2011. *Honeyguide* **57**: 19-21). It does wander out of its normal range, however, and has been spotted in various parts of the country, especially in the Manyame lakes region, mostly in the rainy season (January-April), with the most recent record being from Lake Manyame in October 2002.

On 21 January 2018 a single Slaty Egret was sighted by Doug Kok and photographed on the upper reaches of the Mazvikadei dam, about 18 km north of Banket. Subsequently, on 28 January 2018 Ian Riddell and I went there and visited the last recorded site by boat. After travelling for about one kilometre we came across a small bay where numerous waterfowl were feeding, including Black Herons *E. ardesiaca*, Fulvous *Dendrocygna bicolor* and White-faced *D. viduata* Ducks, Great White Herons *Ardea alba*, Little Grebes *Tachybaptus ruficollis*, Moorhens *Gallinula chloropus*, Red-knobbed Coots *Fulica cristata*, Wood Sandpipers *Tringa glareola* and Blacksmith Lapwings *Vanellus armatus*.

Onward round a spur we again sighted the egret out in the open on the edge of the lake in short grass, along with a Great White Heron and a few Blacksmith Lapwings. It remained there for about 20 minutes before flying off to another feeding spot.



The Slaty Egret photographed at Mazvikadei Dam, January 2018. The wine-coloured patch on the throat, from which its specific name *vinaceigula* is derived, is clearly visible.
Photo © Innes Louw

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Which Race of the Hadeda Ibis Occurs on the Central Plateau of Zimbabwe?

In late April 2108 while I was enjoying the resort town of Victoria Falls, Darryl Tiran, the local bird guide, informed me that 'white eyed' Hadedas *Bostrychia hagedash* frequent this area. These are the northern race of this species, *B. h. brevirostris*, and this created a new interest in this species for me. Darryl Tiran has observed these birds for a number of years and has even watched them feeding in his garden in Victoria Falls. During my visit we located them along the Elephant Hills golf course and in other surrounding areas with short grass. He estimates that there are approximately 50 birds that roam the town and surrounds. They are usually on their own or in small flocks but also co-exist with Sacred Ibises *Threskiornis aethiopicus*.

According to Chittenden *et al*. (2012) there are two races of the Hadeda in southern Africa. The southern race *B. h. hagedash* occurs throughout South Africa, apparently extending into Zimbabwe as far as Harare, and in Mozambique to about as far as Beira. The race *brevirostris* extends from Senegal, east to the DRC and Kenya and then south to the Zambezi River and Okavango delta. [A third race occurs in Ethiopia and Eritrea.] The distribution map in Chittenden *et al*. (2013) is rather misleading as it implies a uniform distribution of this bird on the Zimbabwean plateau. A better picture of the Hadeda's distribution in Zimbabwe is given in Irwin (1981). He wrote that Hadeda (race *brevirostris*) occur all along the Zambezi River, but were absent from the Kariba basin (Donnelly & Donnelly 1983), probably because of habitat loss after the lake was created. However, it has since been recorded from Kariba, having been found in all three quarter-degree squares at the eastern end of the lake as well as from the lower Sanyati and the upper reaches of the lake (Tree 1991). The race *hagedash* occurs along the Limpopo, to about the Shashe River, and up the Save to the Odzi confluence. It also occurs along major lowveld rivers, such as the Nuanetsi, Runde, Mutirikwe and Chiredzi, as well as the Buzi River at Chipinge. Irwin (1981) also reported sight records from Penhalonga and Stapleford (at 1600 m).



Figure 1. The two southern races of the Hadeda Ibis: (a) *B. h. hagedash*, Johannesburg, and (b) *B. h. brevirostris*, Chine pool, Mana Pools National Park. Photos © Innes Louw.

Brevirostris is distinguished by having a white eye (brown in *hagedash*), a more pronounced whitish crescent below the eye, greenish wing coverts (bronze in *hagedash*), and a rather longer bill (despite its name; *brevirostris* = short bill). It is also slightly smaller and darker-coloured than *hagedash* but these characteristics will really only be obvious if the two races are seen together. This would normally be unlikely in Zimbabwe where the two races are well separated unless, of course, both are moving onto the central plateau. Birders who encounter Hadedas on the central plateau should, if possible, try to determine which race they belong to. The information could be sent to Colin Baker for inclusion in his Field Observations.

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How much do we know about the Hadeda Ibis in the Zambezi Valley?

Reading Innes Louw's note (*above*) about the Hadeda Ibis *Bostrychia hagedash* and its two subspecies made me think about the status of this bird in Zimbabwe, particularly in the Zambezi valley below Kariba. Tree (1990) noted that there were no records of this species from this area before 1959 and the first traceable records were from Mana Pools in 1967. However, Alexander (1900) reported that 'parties [of them] were now and again observed roosting on leafless trees overhanging the [Zambezi] river and never seen singly'. He travelled along the section now drowned by Lake Cahora Bassa, but if they were present on that part of the river they probably also occurred upstream in Zimbabwe. Since then the middle Zambezi has been dramatically altered by the Kariba and Cahora Bassa dams with much

presumably suitable habitat being lost. Neither Donnelly & Donnelly (1983) nor Chiweshe (2003) recorded it on Lakes Kariba or Cahora Bassa, respectively, although it has since been regularly reported in small numbers on Kariba in each of the quarter-degree squares at the eastern end of the lake (Tree 1991). Tree (1989) noted that there were no records between Chirundu and Kariba Gorge and wondered about its present distribution along the Zambezi.

Table 1. Some records of the Hadeda Ibis in the Zambezi Valley, extracted from Recent Reports and Field Observations in *Honeyguide*. The largest numbers are given when there was more than one count, dashes indicate that numbers were not given; sources are volume and page numbers in *Honeyguide*.

	Location	Number	Source
January	Mana Pools, 1981	-	**36**: 199
	Ruckomechi, 1991	-	**37**: 82
February	Angwa-Kanyemba road, 2001	2	**49**: 96
	Rifa, 2012	1	**58**: 174
March	Mana Pools, 2006	Heard	**53**: 62
	Rifa, inland pan, 2008	1	**55**: 54
April	Ruckomechi 1994	-	**40**: 253
	Mana Pools, 2003	4	**50**: 103
	Mana Pools, 2005	8	**51**: 69
May	Mcheni Camp, Mana Pools,	20	**38**: 133
	1992	18	**40**: 253
	Acacia Point, 1992	-	**54**: 77
	Ruckomechi, 2007		
June	Near Kariba Gorge, 1988	1	**36**: 149
	Ruckomechi/Nyakasanga, 1991	4	**37:** 189
	Mana Pools, 1995	40	**42**: 43
July	Ruckomechi/Nyakasanga, 1991	4	**37:** 189
	Nkupe camp, Mana Pools, 1994	51	**41**: 33
	Downstream from Chikwenya,		
	1994	14	**41**: 32
	BBC camp, 2004		
	Ruckomechi, 2007	9	**51**: 43
		-	**54**: 84
August	Ruckomechi/Nyakasanga, 1991	4	**37**: 189
	Chikwenya Island, 1989	-	**36**: 199
	Nkupe camp, Mana Pools, 1994	46	**41**: 33
	Between Mana and	38	**41**: 32
	Nyamatusie		
September	Rifa, 2002	1	**49**: 206
	Mana Pools, 2004	-	**51**: 50
	Mana Pools, 2009	-	**55**: 146
October	Mana Pools, 2004	-	**51**: 50
	Ruckomechi, 2005	-	**54**: 92
	Mana Pools, 2009	-	**55**: 146
November	Ruckomechi 1996	25+	**43**: 120
	Ruckomechi 2003	8	**50**: 220
	Mana Pools, 2004	-	**51**: 50
December	Nyakasanga, 2010	1	**57**: 146

Cooper (1972) indicated that it was a breeding resident associated mostly with seasonal pans. This may account for its rather erratic occurrence, which led Tree (1992) to suggest that it may be a seasonal migrant to the area. In an attempt to answer this question, all the records from 'Recent Reports/Field Observations' in *Honeyguide* were tabulated (Table 1). There are records of this ibis in every month and the highest counts seem to be after the rains and into the dry season, from April to November. This may reflect the fact that more observers visit the Zambezi valley during this period but it may also be that it becomes more numerous along the river once the pans begin to dry out. Most of the records in the table are from the river below Chirundu, with relatively few from between Chirundu and the Kariba Gorge. This pattern was also noted by Ewbank (1991) who saw none on this stretch of the river in August 1989 but counted 34 birds between Chirundu and Mana Pools in September 1989. Similarly, Tree (1992) saw none above Chirundu in October 1991 but also counted 34 between Chirundu and Kanyemba, of which 22 were at Chikwenya Island. He found it interesting that there were none below the Chewore mouth, but this is where the river narrows into the Mupata Gorge, which like the Kariba Gorge, is probably an unsuitable habitat for these birds. A similar distribution (but without numbers) was reported by Mundy & Feather (1990) who travelled from Kariba to Kanyemba in October 1989.

Some recent records raise interesting questions about the movements of this ibis population. Howells (1985) did not record the Hadeda during his year-long survey of birds in the Dande Communal Land. This area lies below the Zambezi escarpment in northern Zimbabwe and Mashumbi Pools, where Howells was stationed, is about 50-60 km from the Zambezi River (now Lake Cahora Bassa) in Mozambique. The first Hadeda record from this area was from Mato Pools on the Angwa River in October 1989 (Tree 1990), the second on the Angwa Kanyemba road in February 2001 (Riddell 2009), and a third from Masoka near the confluence of the Angwa and Mkanga Rivers in January 2015 (Baker 2015). In addition to these, Hadedas were also reported from the central plateau on Braeside and Nyapi farms, about 7 km north of Chinhoyi (Tree 1990). These sightings led Tree to wonder if the 'riverine' race was attempting to expand its range.

These records raise a number of questions about the movements of this bird. The Angwa River birds might always have been there, but were possibly overlooked, but if they were not then where did they come from? They might have come down the Zambezi through the Mupata Gorge (but like the Kariba Gorge this may be an unsuitable habitat) or else down the Luangwa, in both cases to the upper reaches of Cahora Bassa, and thence up the Angwa. This suggests that the delta developing in the upper reaches of Lake Cahora Bassa (clearly visible on Google Earth) might be developing into a suitable habitat for this species and it would be interesting to know if it occurs there.

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What Flufftail Could Occur on Komani vlei?

On 13 January 2017 we were birdwatching on Komani vlei north of Harare (17°42'S 30°59'E). I was walking closest to the wet vlei line and other members of the group were spread out higher up the slope, which gradates from flooded short, tufted, perennial grass to taller (*c.*1.5+ m) dry grass up the catena. The person closest to me flushed a flufftail from drier conditions than mine, though there may still have been water or dampness underfoot, and it flew past me, presenting a side-on view. There were immediate cries of 'Streaky-breasted', the species most anticipated, but it wasn't. Flushed flufftails offer varying views, which can be frustratingly quick and fleeting rear-end ones lasting mere seconds, to more satisfying side-on ones or with sustained flights of up to eight seconds, if you are lucky. The quality of lighting falling on the bird can be all important too. This sighting lasted perhaps for four seconds but the angle was good and the dark body and wing coverts with whitish markings separating a red head and tail indicated a male bird.

The two locally common flufftails include the Streaky-breasted Flufftails *Sarothrura boehmi*, a breeding intra-African migrant present between December and March, and the Red-chested Flufftail *S. rufa*, a breeding resident. The former favours seasonally flooded grassland, which the latter avoids, preferring rank vegetation such as that along the Gwebi River (2.3 km away) and Marlborough vlei (4 km away) where it is regularly recorded. In any event neither the Streaky-breasted nor the Red-chested has a red tail. Though it now occurs quite regularly in Harare gardens the Buff-spotted Flufftail *S. elegans* can be eliminated on the grounds of unsuitable habitat and wrong colours.

This leaves two possibilities, the White-spotted Flufftail *S. pulchra* and the Striped Flufftail *S. affinis*. The southern limit of the White-spotted is Mwinilunga in northwest Zambia, and being chiefly a forest bird, is highly unlikely even as a lost wanderer in the very wet 2016-17 rainy season. This leaves the Striped Flufftail, which occurs in dry montane grassland in the eastern highlands but also in fynbos and wetlands in South Africa. I have encountered it in quite tall (1.5 m) dry grass on the very top of a hillock in Gleneagles, Nyanga, though Irwin (1981) gives its habitat as short grassland. Irwin says it is thought to be sedentary, though a nocturnal casualty was once recorded at Nyanga. In KwaZulu-Natal its movements may be altitudinal, possibly over as little as 35-40 km, to altitudes below 1000 m, while elsewhere, records of birds flying into buildings at night, in Zimbabwe and Cape Province, South Africa, hint at movements in other areas (Taylor & Kirwan, 2017. *In*: del Hoyo, *et al*. (eds.), *Handbook of the Birds of the World*. Lynx Edicions, Barcelona).

So, this was most probably a Striped Flufftail, which in itself would represent a quite unexpected westward movement. It should be noted that no flufftails (or migrant crakes) have been recorded on Komani vlei before.

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More records of Spur-winged Lapwings in Zimbabwe

The first two records of the Spur-winged Lapwing *Vanellus spinosus* were published by Johnson (2004. *Honeyguide* **50**: 185-186) and Varden (2005. *Honeyguide* **51**: 33-34) and summarised by Riddell (2007. *Honeyguide* **53**: 41-52).

The third record was of a single bird at Hot Springs, Rifa Education Centre, Chirundu (1628B2) on 17 August 2013 where it was seen by Nkululeko Hlongwane, an observer who knows the Blacksmith Lapwing *V. armatus* well and recognised it was not that species. He described its features to me and clearly recognised that it was a Spur-winged Lapwing.

The fourth record was of a bird seen by P.J. Mundy at Salt Pans, Hwange National Park (1826C1), after the game count on 8 October 2014. Two birds were seen near several Blacksmith Lapwings and were recognised by the observer, who knew the Spur-winged from northern Nigeria (1969-1972).

The latest record, the fifth from Zimbabwe, was of a single bird photographed by Arnold Tshipa and Richard Yohane on the Zambezi floodplain near Ruckomechi Camp, Mana Pools (1529C3), on 14 September 2018. Again, it was in the company of a Blacksmith Lapwing.

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The Spur-winged Lapwing (left) accompanied by a Blacksmith Lapwing, Ruckomechi Camp, Mana Pools National Park, 14 September 2018. Photo © A.W. Tshipa.

A Further Zimbabwean Record of the Gull-billed Tern

The Gull-billed Tern *Gelochelidon nilotica* is a Palaearctic migrant that has occasionally been recorded in Zimbabwe. The first record was from Lake Chivero in June 1969 and since then there have been several sightings on lakes Chivero and Kariba, at Victoria Falls and along the Zambezi, and in Hwange National Park. The most recent was almost certainly the bird seen in the Sanyati Gorge, Lake Kariba in August 2001 but misidentified as a Black-naped Tern *Sterna sumatrana* (Tree, 2006. *Honeyguide* **52**: 40-46). There seem to have been no further records of this species in Zimbabwe since then. This note reports a new sighting.

I was first notified of this bird by Asher Dare and on 16 October 2017, together with Roger MacDonald and James Ball, I travelled to a pair of small and quite shallow farm dams 2 km west of Joyce Mine at Beatrice (18°17'S, 30°53'E). Here we spotted this bird and were able to photograph it, leaving no doubt as to its identity. The distinguishing features were its short, heavy black bill and whitish plumage with a dark smudge behind the eye, clearly identifying it as a non-breeding adult Gull-billed Tern. Another distinctive identifying feature was its grey, not pale, rump.



The Gull-billed Tern standing in the water at the farm dam.
Photo © Tony Wood

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Why on Earth Study Nightjars?

'Why on earth did you choose nightjars as your research subject?' Why indeed! This is a question that family, friends and colleagues have often asked me over the past 50 years and one that I have frequently asked myself. Most nightjars (Caprimulgidae) are extremely difficult to find during the day, when they roost on the ground, where their cryptic plumage patterns blend perfectly with the chosen substrate of each species. They are crepuscular insectivores, feeding for brief periods during dusk and dawn, which is also when their distinctive songs can be heard during the breeding season. They are rather small, solitary breeders, so obtaining sufficient data for statistical analyses is a challenge. Nightjars are clearly not a sensible research subject for any form of academic degree. Now, the short answer to this question is that I did not, in fact, choose to do research on nightjars. It is something that just happened, as this short note will explain.

In the early 1960s I was Ringing Organiser for Central Africa, acting on behalf of the Rhodesian Ornithological Society (now BirdLife Zimbabwe), receiving and distributing bird rings supplied by the South African Ornithological Society (now BirdLife South Africa). Their Organiser was Geoff McLachlan of the Port Elizabeth Museum. I encouraged bird ringing around Salisbury (now Harare), resulting in regular outings by a dedicated group of ringers (mainly Des Jackson, Rolf Chenaux-Repond, Chris Hodgson, Derek Solomon, Peter Ward and Rud Boulton) to Beatrice (to ring bee-eaters), the Beatrice–Salisbury road (to ring swallows), Rainham Dam (to ring waders), and Warren Hills (to ring nightjars). Most of the birds captured on these excursions were ringed, weighed (Britton 1967), measured and checked for moult before being released. The ringing data were submitted to Geoff McLachlan.

The breeding colony of Southern Carmine Bee-eaters *Merops nubicoides* at Alsace Farm on the Mupfure River north of Beatrice had long been a major attraction for birdwatchers and ringers. For a short while after a cliff collapse the birds moved to a new colony further downstream but soon returned to the original colony, where thousands were ringed after being caught in mistnets as they left their nest holes. Post-breeding dispersal took most of them into north-eastern South Africa and the Sul do Save Province of Mozambique, then to Tanzania before returning to breed (Jackson & Solomon 1966). Several of these ringed birds were subsequently recovered away from the colony (Jackson 1967), one of them 644 km south, 4 years, 330 days after being ringed. One pair of bee-eaters nesting in the top row of the colony was fitted with radioactive rings (Severn 1968), the radioactivity of the male's ring being double that of the female's, to provide a continuous record of their movements within the nest tunnel, which was 2.14 m long, with a nest chamber 0.75 m below ground (Ward 1967, 1969).

Swallows roosting in nests in 50 culverts under 18.8 km of the Beatrice–Salisbury road were trapped and ringed at night. Roosting birds were trapped by holding a small butterfly net over the nest entrance, shining a light down the entrance tunnel and, if necessary, scratching the outside of the nest bowl to persuade the birds to exit. The contents were checked using a dental mirror with torch bulb attached. Eggs and nestlings were not removed for detailed examination or measurement. Captured adults and fledged young were examined, identified, ringed, measured and weighed before being returned to the nest. They usually remained in the nest while we left as quietly as possible. At least five species had adapted their breeding behaviour to man-made road culverts, none more so than the Red-breasted Swallow *Cecropis semirufa*, which may be found nesting in the smallest (46 cm diameter) of pipe culverts (Jackson & Spottiswoode 2004). This species is double-brooded and returns to the same nest site year after year, though first-year birds appear to disperse well away from the natal area. There was some evidence of low divorce rates. Both adults roost in the nest at night, accompanied at times by a first brood of fledglings together with a second brood of naked young. Crawling into culverts at night was not without some surprises! Spiders, other creepy crawlies, rats and mice, feral cats, bats, and, worst of all, piles of human excrement, were often encountered and had to be avoided.

Nightjars were frequently seen on roads at night and were particularly plentiful on the dirt roads around Warren Hills, 7 km east of Harare, subsequently chosen as the site for the Heroes Acre burial ground and National Monument. The ringing group chose a road circuit of 16 km around Warren Hills for its wide range of road surfaces, road widths and adjoining habitats. The nightjars sitting on these roads were surveyed approximately once a week at varying times of the night for a year. On each occasion the full circuit was covered in both directions to give a total survey distance of 32 km. All nightjar encounters were documented, along with notes on moon phase, cloud cover, wind and rain. The *modus operandi* followed by participants in the survey was simple: "Drive along at 25 kph. To avoid cramp use cruise control. With headlights on bright, watch the road ahead.

When the tell-tale red eye of a nightjar is seen, allow the car to roll gently to a stop 4–5 m from the bird. Open doors before car comes to a halt. Apply the handbrake. Leave motor running. Get out quietly with a torch and focus its beam on the bird (do not close doors). Switch off car lights. Approach the bird slowly, keeping the beam focussed on it (engine noise masks your footsteps). Your companion moves in more quickly and drops a butterfly net over the bird before you reach it. Return to the car to identify, ring and examine the bird" (Jackson 2003).

A good weekend of ringing might then be Saturday with the Beatrice bee-eaters until dark, then swallows under the road on the way home, followed by Sunday with the waders at Rainham Dam and the Warren Hills nightjars after dark. This happy arrangement came to an end on 11 November 1965 with the Unilateral Declaration of Independence. International sanctions imposed on Rhodesia resulted in the introduction of petrol rationing, which meant that we could no longer travel to Beatrice or Rainham Dam, so our bee-eater, swallow and wader ringing activities came to an end. However, the nightjars of Warren Hills were sufficiently close to be visited regularly, so the survey there continued.

At this time, I lived on Retreat Farm on the outskirts of Harare and spent much time studying the birds occurring and breeding there, including nesting nightjars (Jackson 2015). As a result of these close encounters with nightjars on Retreat Farm and at Warren Hills, I became intrigued by these birds and wanted to know more about the family, so I started researching it, especially after joining the staff of the Mutare Museum as Keeper of Zoology in 1970. In hindsight, this serendipitous entry into the difficult field of nightjar research was no bad thing. It introduced me to one of the most delightful and fascinating of avian families. It also produced a Master's degree in zoology (Jackson 1983) and over 50 published papers on Afrotropical nightjar weights, measures & identification; taxonomy; anatomical structures & functions; geographic, ecological & seasonal distribution; song & territory; breeding biology; food & feeding; development & behaviour; moult; ectoparasites and mortality.

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An Uncommon Garden Visitor: The Boulder Chat

One day during the first week in March 2018 my wife and I were sitting on the veranda watching the comings and goings of common garden birds at the bird bath when our attention was drawn to a dark, long-tailed starling-sized bird which flew across our field of vision in straight flight, settled briefly on a low branch of one of the acacias and then carried on into denser vegetation. It appeared to be virtually black in the shade of the trees, but the white tips of its outer tail-feathers and white wing-bar on its primaries were clearly visible as it flew past us at a distance of about 25 metres.

I identified it, somewhat incredulously, as a Boulder Chat *Pinarornis plumosus* and was reminded of seeing one about 20 years ago on the west facing side of Sentosa hill, not more than 200 m away as the chat flies, in a friend's garden where it stayed for a week or so.

We live in a one-acre property in Sentosa (Harare) where the habitat fits very well that described in the relevant literature as the one preferred by this species. I wonder if the Boulder Chat has been recorded from a Harare suburb before? It must surely be an unusual garden bird in the City.

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Yellow-billed Oxpeckers in Mana Pools National Park

On 7 October 2015 Andrew Smith, a safari guide, photographed a couple of Yellow-billed Oxpeckers *Buphagus africanus* on a herd of Cape Buffalo *Syncerus caffer*, at Kavinga Safari Camp in Mana Pools National Park. The herd was on the floodplain of the Rukomechi River close to the Research Station and the escarpment in the south of the park.

The Yellow-billed Oxpecker is all but unknown in the Mana Pools section of the Zambezi Valley. Its distribution stretches from the west of the country as far as Matusadona National Park on the shores of Lake Kariba 'although always having been absent from the Middle Zambezi Valley where *erythrorhynchus* is common' (Irwin, 1981). There is a record of its occurrence 'on the back of a Kudu near the main road' (Hodgson & Hodgson 1967. *Honeyguide* No. 51: 12-15), which possibly refers to the stretch between Chirundu and Marongora. It also occurs in the Lower Zambezi National Park in Zambia (Dowsett *et al*., 2008. *The Birds of Zambia*. Tauraco Press, Liége) and this is the likely provenance of these birds.

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Editor's note: In his checklist of birds of the Zambezi valley from Kariba to Zumbo, Cooper (1972. *South African Avifauna Series* No. 85: 44 pp.) commented that *africanus* had been "observed [in] July and August" but gave no further details. Similarly, Howells (1985. *Honeyguide* **31**: 45) listed it in his article on birds of the Dande Communal Land, east of Mana Pools, but without any other information.

Extraordinary Behaviour of Pied Crows around a Dead Individual

On my way home on the afternoon of 19 October 2018 I was astounded to witness a Pied Crow *Corvus albus* attempting to copulate with a dead crow – can it have been its mate? Early the next morning I returned to the site to find more than fifteen crows all in close proximity, but with four or five of them around their deceased friend. One of them briefly attempted to copulate again with it, and then others started to close in on the deceased crow to posture with lots of croaking and a few pecks at the deceased bird.

On the third day there were no crows around the dead bird and it seemed as if they had come to terms with the demise of one of their fellows. How common is this type of behaviour where a bird attempts to copulate with a dead mate, if that is what it was trying to do? What was the purpose of their posturing around the dead crow; can one interpret this type of behaviour as a sign of grief?

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Editor's note: This behaviour was reported by Swift & Marzluff (2015. *Animal Behaviour* **109**: 187-197) who worked on American Crows *Corvus brachyrhynchos*. They found that this behaviour enabled crows to learn about potential threats that might lead to the death of themselves or other crows. As part of their experiment they put out food so that numbers of crows assembled regularly. Then one of the researchers walked past them without stimulating any reaction. After that, she put on a mask to disguise her appearance and walked past the crows again this time carrying the body of a stuffed crow and the crows became agitated and mobbed her. The next day, they repeated the experiment but this time the masked worker was not carrying a crow; she was still mobbed and clearly the crows recognised her masked face as that of a potential threat.

Swift & Marzluff have documented attempted copulation with a dead bird in American Crows and it has been more recently described in Sand Martins *Riparia riparia* in Japan (Tomita & Iwami, 2016. *Ornithological Science* **15**: 95-98). Their explanation for this behaviour is that in species with no sexual dimorphism, a dead bird lying in a position resembling a soliciting female could stimulate copulation by a male. Readers might find the following YouTube clips of interest:

https://www.youtube.com/watch?v=ixYVFZnNl6s (crows and the masked researcher);
https://www.youtube.com/watch?v=7kaJv8wrNfg (crows copulating with a dead bird); and
https://www.youtube.com/watch?v=3b1cthGJFZ8 (Sand martins copulating with a dead bird).







A group of Pied Crows around the dead body of another. The picture in the top left shows a bird attempting to copulate with it while the other two pictures shows them pecking at the dead bird and communicating with each other.

Photos © Innes Louw.

An Unusual Scarlet-chested Sunbird in the Bvumba Mountains

During the weekend of 15-16 September 2018 whilst birding around the Bvumba Mountains in Zimbabwe at Seldomseen cottages, near the protea plantation, Jourdan Delorie came across a strange sunbird feeding on protea flowers. It was almost certainly a Scarlet-chested Sunbird *Chalcomitra senegalens*is with some unusual plumage variances. These could be clearly seen in a photograph – regrettably too fuzzy to print – which clearly shows a black bird with a scarlet throat and chest and a reddish tail with its bill in a protea flower. One wonders what kind of genetic mutation produced this individual and whether or not it might be passed on to its descendants; visitors to Seldomseen should keep a lookout for it or any others like it.

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Birding in New Zealand: A Paradise Lost?

"*The ship lay at a distance of somewhat less than a quarter of a mile from the shore, and in the morning we were awakened by the singing of the birds; the number was incredible, and they seemed to strain their throats in emulation of each other. This wild melody was infinitely superior to any that we have ever heard of the same kind …"*

So wrote Joseph Banks when HMS *Endeavour* anchored off the east coast of New Zealand's North Island in October 1769. How different it is today! The country's silent forests testify to man's impact on the unique avifauna of this country. New Zealand was the first piece of Gondwana to break away and is today some 1500 km away from Australia, the nearest continental land-mass. It is estimated that there were about 245 bird species on the islands when humans first reached them with a uniquely high proportion (53%) associated with aquatic habitats (81 seabirds, 32 charadriiformes and 18 ducks). There were about 95 species that bred on the main islands, of which only 29 were passerines.

Since there were no terrestrial mammals, apart from two small bats, many birds were flightless or weak fliers, and ground-nesters with a low reproductive rate. They were therefore defenceless when the first humans arrived from Polynesia about 800 years ago. Direct hunting and predation by dogs, pigs and Pacific rats led to the extinction of the larger species, including the moas, a swan, two geese, two giant coots and Haast's Eagle, the largest known raptor. Some 50% of the native forest cover was destroyed by fire. European settlement in the 19th century brought about massive environmental changes; about 50% of the remaining forests were destroyed and 95% of the country's wetlands drained for agriculture. A suite of introduced mammalian predators, such as ship rats, mice, cats, stoats, weasels, possums and hedgehogs completed the destruction. Altogether, some 31% of New Zealand's birds are estimated to have been extirpated by humans, and many of the remainder are critically endangered.

Today, the most striking feature of New Zealand's avifauna is the number and dominance of introduced species. Most come from Britain (e.g. Feral Pigeon, Blackbird, Song Thrush, Starling, House Sparrow, Greenfinch, Goldfinch and Chaffinch), but others come from Asia (Indian Myna, Spotted Dove) and Australia (Australian Magpie, Eastern Rosella). In the countryside, one can encounter Black Swans and Pheasants, as well as Australian Brown and California Quails, while Skylarks and Yellowhammers are abundant in some areas. Feral turkeys are quite common as are feral chickens, ducks and even peacocks in some places. The most abundant duck is the Mallard, which has competed and hybridized with the native Grey Duck, whose numbers have now verging on extinction.

The endemic families of New Zealand birds have not fared well. The moas (11 species, including the largest known birds) and the adzebill (1 species) are extinct, while the kiwis (5 species) are endangered, being especially vulnerable to dogs. The wattlebirds, with three living species (the North Island Kokako and North and South Island Saddlebacks) were ultimately restricted to a few predator-free islands, while the South Island Kokako is probably extinct and the Huia (well-known because males and females had different-shaped bills) was last seen in 1907. The Stitchbird (family Notiomystidae) was reduced to a single population on one small island. The family Acanthosittidae (New Zealand wrens) is especially interesting because it included the only flightless passerines – four species, all now extinct. The last to be seen was the Stephens Island Wren, reported by the lighthouse keeper in 1894 before they were extirpated by cats. Two of these wrens still survive; the Rifleman in forests on both main islands, and the Rock Wren which lives in the high alpine zone of the South Island where it is now seriously endangered.

Most of my birding has been done in or around Auckland where some interesting native birds can still be seen. Many of them originate from Australia, having arrived at some time in the past. This process is still continuing and three 'self-introduced' species have prospered since European settlement. Silvereyes, the widespread Australian white-eye, are now a common woodland and garden species, while the White-faced Heron and Spurwing Plover (no-one here calls them 'lapwings') are common on tidal mudflats, beaches and inland waters. The plovers also occur in pastures as well as on school playing fields and parks and can sometimes be heard flying overhead at night, much like Crowned Plovers in Zimbabwe. There is now a small population of Barn Owls in the far north, so this may become yet another successful Australian immigrant.

Welcome Swallows, once seasonal visitors, are now common residents. The Kingfisher ('Sacred Kingfisher' in Australia) is common and widespread, feeding on coastal mudflats as well as in woodland away from water, and where there are big trees one can hear Moreporks (the Australian 'Boobook Owl'), the only extant native owl and named after its distinctive call. There are no native crows in New Zealand and their place is taken by Red-billed and Black-backed Gulls ('Silver' and 'Kelp' Gulls in Australia). The former is common and can be found around schools, shopping centres and so on, and of course all along the coast.

The Pukeko (no one calls it the 'Australasian Swamphen') is a common and popular species, found in almost any open area near water as well as in gardens and parks. Once considered to be the same species as our 'Purple Gallinule' they are wary birds but certainly not as shy and retiring as their African counterpart. They have, for instance, recently been conspicuous where I live, perching on my roof and those of the neighbours, calling and chasing each other.

Some endemic species occur in the suburbs. The most obvious is the Tui, a thrush-sized honeyeater with the most extraordinary range of calls, some of which cannot he heard by the human ear. They are handsome birds, predominantly glossy black with two conspicuous white feathers on the upper chest, hence their old name of 'parson-bird.' They have to move around Auckland where flowering trees are abundant but irregularly distributed and natural selection has apparently increased their flying abilities, and they also nest higher than they once did to avoid predators. Less common is the magnificent New Zealand Pigeon, about twice the size of a feral pigeon and a beautiful purple-green colour with a snowy white belly. Their population was once severely reduced by hunting but like all native birds they are now protected and their numbers have recovered. [Protection is taken seriously; in 2016 a Maori tribal leader was fined NZD24,500 (about USD17,000) plus home detention and community service for killing five pigeons and lying about it!] The only other endemic species likely to be seen in suburbia are the Grey Warbler and the Fantail. The warbler, an inconspicuous and rather apalis-like bird, with a distinctive but rather quiet call, is the country's most widely distributed endemic species. The fantail is a delightful little bird, very tame and approachable; it often flies around one's feet presumably hawking insects flushed up as one walks along. Both species belong to Australasian families and seem to be well adapted to resisting predators.



A Tui *Prosthemadera novaseelandiae*, one of the best-known and popular of New Zealand's endemic birds; a brand of beer and range of garden products are named after it and it features regularly in articles, stories and artwork. This one was feeding on nectar from the flowers of New Zealand flax and the orange colour on its forehead and crown is a dusting of pollen. Photo © Brian Marshall.

Birding sites along Auckland's west coast include Muriwai beach where a large colony of Australasian Gannets, and White-fronted Terns, is a popular tourist attraction. Further down the coast in the Manukau Harbour shell banks and mud flats support some interesting birds, such as Royal Spoonbills, White-headed Stilts, Wrybills (a small sandplover with a bill bent sideways), and Banded, Black-fronted and New Zealand Dotterills (they don't call them 'plovers'). South Island Pied Oystercatchers ('SIPOs') are often present in large numbers, while Variable Oystercatchers (mostly black but sometimes with variable amounts of white) are usually in pairs rather than flocks. In summer, large flocks of Bar-tailed Godwits and Red Knots are also present. Regular counts indicate that their numbers are falling and there is concern about the destruction of their 'refuelling' stations in Asia, especially in China. Local ornithologists have rather surprisingly developed a good relationship with biologists in the one country that has not (yet) over-developed its coastal areas – North Korea. New Zealand birders have even been allowed to count (but not photograph) godwits in a sensitive military area close to the Chinese border! They have also been training young North Koreans in wader identification and counting.

A sewage works in the harbour has a large holding area, a good place for Black Swans, Paradise Shelducks, Australasian Shovellers, Grey Teal, and (less often) New Zealand Scaup, while New Zealand Dabchicks can be quite common. These birds breed here and this attracts Australasian (Swamp) Harriers, one of only two resident raptors. These harriers are common and can be seen in the suburbs as well as almost anywhere in the countryside. They must have benefitted from the conversion of forest to pasture and a plentiful supply of rats and mice. The only other raptor is the endemic but scarce New Zealand Falcon.

The east coast of Auckland has several good birding areas, all on predator-free islands or areas on the mainland protected by predator-proof fences. The best-known of these is Tiritiri Matangi Island, which has been predator-free for a number of years and now supports good populations of some endangered species. I had the odd experience of standing in one place and seeing three of the world's most endangered species in one place – the Stitchbird, North Island Saddleback and South Island Takahe. The North Island Takahe is extinct and the South Island species was thought to be until a small population was discovered in a remote area in the Southern Alps. Captive breeding and translocation to predator-free areas has brought about some recovery; the population has just passed the 300 mark. Takahes, the largest members of the rail family, are similar in appearance to Pukekos but are flightless, heavy-looking and rather sluggish birds.

On another island, Motutapo, I have been able see another of the world's rarest birds, the beautiful little Shore Plover. It was once common around the entire coast of New Zealand but was ultimately restricted to two small islets in the Chatham Island group, some 800 km east of the South Island. Fortunately, it breeds quite well in captivity and they have been released on several offshore islands around the North Island. Unfortunately, they are strong fliers and some might venture to the main island where they will be at risk from mammalian predators. I also managed to pick up two nice lifers here – Banded Rail and Spotless Crake.

Another important site off Auckland is Little Barrier Island, predator-free and closed to the public, which supports the only population of wild Stitchbirds as well as some of New Zealand's endangered reptiles and insects. It also has a small population of New Zealand Storm Petrels. This bird was known only from three specimens collected in the 19th century and was believed to be extinct until one flew into the cabin of a boat in 2005. I went on a seabird-spotting trip and we saw what everyone insisted was a NZ Storm Petrel but as it was the first storm petrel I had ever seen, I had to take their word for it. We also saw a Giant Petrel, a White-capped Mollymawk ('Albatross' to everyone else), Pintado Petrels, Dove Prions and Fluttering Shearwaters. Sadly, sea-bird spotting is rather expensive so I have not been able to repeat the experience.

I have been fortunate enough to travel to other parts of the country, which has yielded some interesting species. In the far north I heard an Australasian Bittern one morning and kiwis during the night – both 'megatwitches' if I had been able to see them. The only consolation was an excellent sighting of Fernbirds, a small warbler that lives amongst reeds and is normally very secretive. We also encountered a number of Wekas, bold, flightless rails about the size of a chicken that wandered around the campsite and chalets where we were staying. I was also able to add the rare endemic Brown Teal to my list (it has a flightless form on Auckland Island, a sub-Antarctic island belonging to New Zealand).

Many South Island birds differ from those on the North Island, either as distinctive subspecies or closely related species-pairs. For example, the male North Island Tomtit (a pert little black-and-white bird) has a white belly while the South Island form has a yellowish one, but the females look alike and they are not considered to be different species. On the other hand, the North and South Island Saddlebacks look alike but their juveniles are quite different and they are now considered to be distinct species.

Once, driving through the Buller Pass early one foggy morning, we caught a glimpse of what looked like a brown, furry football with legs, disappearing into the vegetation. It was of course the rear end of a kiwi, which was nice because they are normally nocturnal and hardly ever seen but frustrating because we would like to have seen the whole bird.

Crossing the Southern Alps by road brings one into contact with Kea Parrots, the world's only alpine parrot. These large parrots are bold, intelligent and curious and are commonly found at tourist spots since they are apparently attracted to humans. One is not permitted to feed them but they seem to like investigating cars, and are especially fond of tearing off rubber from windscreen wipers and door seals. In order to keep them occupied, and off the road, 'kea gyms' have been set up in some of these areas with swings, ladders and so on. Keas are known to be carnivorous and there is an episode in one of the David Attenborough films showing them pulling petrels out of their burrows. They were said to kill sheep and high-country farmers are thought to have killed about 150,000 of them until they were finally given protection in 1986. Unfortunately, their numbers are still declining and there is concern about their future.

Our next port of call was Dunedin where the Otago peninsula offers some interesting birding. The only breeding colony of Royal Albatrosses on the main New Zealand islands is situated at the tip of the peninsula and one is able to visit under carefully controlled conditions. Every year the Department of Conservation places a webcam near a breeding pair so one can monitor them 24-hours a day on YouTube. Another attraction was large breeding colonies of two endemic cormorants, the Spotted and Otago Shags (all cormorant species are called 'shags' in New Zealand). The latter come in two colour phases; the pied phase is black with a white throat and belly, and a white wing bar while the bronze phase is dark brown with a glossy sheen. The two phases seemed to be in equal numbers in the main colony and gave the impression that two different species were breeding with each other.

We were able to visit, again under strictly controlled conditions, a colony of the critically endangered Yellow-eyed Penguin. This endemic species is very sensitive to disturbance, and has also been affected by overfishing. Many chicks starve while a number of adults have been attacked by barracudas, which have lost their usual prey through overfishing. We saw more penguins in the evening, when we were able to watch Little Blue Penguins coming ashore. It was high summer so we had to stay up until about 10.30 p.m. before it got dark enough for them to start coming onto the land. It made for a very late night but it was worth it.

Our final stop in the south was Stewart Island, the third largest island, located to the south of the South Island. We reached it after a rather hair-raising hour-long ferry trip – my first experience of the Southern Ocean! Stewart Island is normally a good seabird destination, but we were there just before Christmas and fishing had stopped for the holiday period so it was not as good as we had hoped. Nevertheless, we saw quite a few White-capped Mollymawks, some Royal Albatrosses, and Common Diving Petrels. Sooty Shearwaters were seen some distance off; these are muttonbirds and are harvested by Maori communities under traditional rights. They are available in some butcheries in Auckland, but they look unattractive and I have not been able to pluck up the courage to try one. We also saw Foveaux Shags, once considered to be the same species as the Otago Shag but now separated on molecular grounds. The two species were once known as the Stewart Island Shag but, to the disgust of Stewart Islanders, this name has been dropped (the Foveaux Strait separates the Stewart and South Islands).

The highlight of Stewart Island for us was Ulva Island, a small islet in the main harbour. This gives one some idea of what New Zealand must once have been like because it was never settled or logged. Here Kakas, the forest equivalent of the Kea Parrot, were abundant, and we also saw some endemics such as South Island Saddlebacks and Robins, and the Brown Creeper, but we missed the Yellowhead, which is scarce on the main island. While waiting at the jetty for the boat back to the main island, we were treated to a wonderful display of fishing by a Little Blue Penguin in crystal clear water about 50 cm deep. Its astonishing speed and agility as it chased small fish was a delight to watch and a fitting conclusion to our island visit.

On the whole, birding in New Zealand is disappointing to someone from Africa where the diversity is so much greater. However, the birds they have are interesting and of course if one enjoys birding then they are worth seeing. Major efforts are being made to conserve them and New Zealand leads the world in managing endangered species. The government has announced an ambitious project to make the country predator-free by 2050 but it may founder because New Zealand apparently has the highest per capita population of domestic cats, and feral cats are a serious problem. Also, much of the natural habitat has also been destroyed although conservation efforts are being made. However, if they were to accomplish that then the New Zealand described by Joseph Banks might be resurrected.

Brian Marshall

BOOK REVIEWS

Featherings: True Stories in Search of Birds

Vernon R.L. Head (Editor)
2017. Jacana Publishing, Auckland Park, South Africa, pp. 183. ISBN 97811431425792

This little book contains anecdotes about their birding experiences from twenty, mostly professional, southern African ornithologists. They encapsulate many of the things that make birds and birdwatching interesting – and good fun – and most of us will be able to relate to them having had similar experiences ourselves.

These stories cover a wide geographical range but there are two that relate directly to Zimbabwe. The first, Peter Steyn's article 'Owls in a cave,' is no surprise since his love of these birds is well known. I witnessed it myself back in 1972 in Botswana. He spent hours crouched in a small hide, perched perilously high up on seemingly flimsy scaffolding, to photograph a Barred Owlet at its nest; few of us would be so dedicated. His article describes his efforts to take the first photographs of the Cape (Mackinder's) Eagle Owl, a species first discovered in Zimbabwe in 1967 and even today seen by very few Zimbabwean birders.

The second, 'My year in miombo' is Warwick Tarboton's account of a year spent working on a geological survey somewhere west of Chinhoyi. This gave him the chance to study the 'miombo specials' that could be found in what was then relatively undisturbed miombo woodland. For me, this was a somewhat nostalgic article because having grown up in Matabeleland I had had little experience of miombo. This changed after I went to University in Harare in 1963 and became acquainted with Richard Brooke – an unforgettable character well described in this story. Sadly, this is rather a lost world now since this vegetation has been severely degraded and cleared. There are few areas with extensive miombo woodland and finding a 'miombo special' is nowadays something of a challenge for most Zimbabwean birders.

Of the other stories, I particularly enjoyed Callen Cohen's month-long obsessive search for the Congo Peacock. Having heard and recorded them, but failing to see one, he encountered three of them sunning themselves on the road as he was leaving for home. How many of us have had similar experiences with a much longed-for sighting? Rob Little's story of finding the Shoebill left me rather envious because I had tried, but failed, to see them in the Murchison Falls National Park and eventually had to settle for a captive bird in the Entebbe Botanical Garden.

Now that I live in New Zealand, I also enjoyed Susie Cunningham's 'The weirdest bird in the world' about her work with one of the five Kiwi species. Although this is the iconic national bird of New Zealand, very few 'Kiwis' have ever seen one in the wild. It must be a real privilege to work with them and get the opportunity to handle them and see them close up.

The remaining adventures include searching for the Rhinoceros Hornbill in Borneo (Morné du Plessis), finding Rudd's Lark (David Allan) and evoking the unique characteristics of desert birds (Mark Anderson). Some of the perils of birding in strange places were amusingly related by Richard Dean (getting a telephone directory in Naboomspruit) and trying to get into Sao Tome without a visa (Ross Wanless). Other stories dealt with Sri Lanka, attempting to find the Karamoja Apalis, and introducing young people to the pleasures of birding.

This book would be a pleasant companion for someone who needs something to read during the heat of the day when birds are inactive. Author royalties will be donated to the Percy FitzPatrick Institute of African Ornithology in Cape Town. These stories will contribute to our understanding of birds and their conservation.

Brian Marshall

Warriors, Dilettantes and Businessmen: Bird Collectors during the mid-19th to mid-20th Centuries in Southern Africa

W.R.J. Dean
2016. John Voelcker Bird Book Fund, Cape Town, pp. 280. ISBN 9781920602048

This book is an account of the early collectors in southern Africa who laid the foundation of ornithological knowledge over a hundred-year period. Specimens collected before 1850 proved to be too inadequately labelled to be useful and are not considered here. Collections from 43 museums in Europe, United Kingdom, North America, Australia and Africa were visited and catalogues obtained with the notable exception of the Natural History Museum in Bulawayo, which is the largest in Africa, but lacks a comprehensive catalogue. This is a major omission although the expansion of this collection probably occurred after the Second World War and therefore towards the end of the period considered in this book.

The earliest collectors were wealthy people who collected birds and other specimens for decorative rather than scientific purposes without making any use of them. Louries, trogons, pittas and sunbirds spring to mind as very attractive Zimbabwe bird species that may have found their way into the glass cases filled with stuffed birds that were common in Victorian households. These specimens were often in rather unnatural poses and standardised study skins only appeared in the mid-19th century and private collections and sales of bird skins and eggs had almost ended by 1900.

It is not clear when the first Zimbabwean specimens were collected because, as far as we know, the early Portuguese visitors did not collect any bird specimens. The earliest specimens were perhaps collected by hunters and travellers such as F.C. Selous, who passed through the area in the 1870s and donated some 5 000 specimens to the Natural History Museum in London. These individuals presumably collected on the Great North Road reaching Zimbabwe by ox wagon several months after entering at Tuli. Later came the railway with the earliest reported trip to Victoria Falls by W.L. Sclater in 1904.

The next chapter covers collectors who started in the Army. The only name really relevant to Zimbabwe is Darrel Plowes, whose collection ended up in the Bulawayo Museum. I was pleased to see that J.S. Carlisle, who collected in southern Zimbabwe from 1919 to the early 1930s, is included. Some of his specimens ended up museums in Southern Africa, Europe and the USA but many of them, including the eggs, ended up in the Bulawayo Museum where they were catalogued by H.W. James in 1970. He may belong here as there is a Corporal J.S. Carlisle on a Boer War website list of the soldiers involved in the struggle.

The next contributors were the private collectors ('my collection is bigger than yours') who published more than did the military personnel. The earliest reported collections were made in 1873/74 by Buckley (who only reached the Antelope Mine area) and Oates who reached Victoria Falls but passed away soon after. His brother published his account, with an appendix by R.B. Sharpe on his well-

labelled bird specimens, which later reached the British Museum. Another expedition sponsored by J.S. Jameson reached Mashonaland and was also published in *Ibis* by T. Ayres. Boyd Alexander sailed up the Zambezi River as far as the Kafue confluence and also published an account in *Ibis*. Cecil Priest collected at Marondera from 1929 to 1949 and some of his are kept in museums in the United States. He published the first account of Zimbabwe birds, which is very discursive by modern standards and he was very under-informed about the Matabeleland situation, apart from the doubtful records from R.H.N. Stevenson. [**Editor**: these records are now known to be deliberate frauds, see Irwin, M.P.S. 2010. Priest's *Birds of Southern Rhodesia* and the Stevenson hoax. *Honeyguide* **56**: 124-125.] I am surprised he never mentions Carlisle who corresponded with and traded specimens with Priest's close collaborator Walter Krienke. Further, Priest doesn't mention the literature published in *Ibis* and other journals but he does mention some of the collectors.

The final group was those who combined commercial trade in specimens with other occupations. Thomas Ayres was an important example, operating mainly in the former Transvaal. His only Zimbabwe contribution was under the sponsorship of J.S. Jameson (see above). Various collectors like Bangs, Boulton and later Masterson collected eggs in the 1930s and 1940s and mainly either published or documented their records in the Nest Record Card System. Regrettably, no report was produced by the Carp Expedition to Zimbabwe in 1949.

The next chapter discusses the development of museums in Southern Africa, which started in Zimbabwe with the Bulawayo and Harare Museums that were founded around 1900. It is pleasing to record that the Natural History Museum collection in Bulawayo is currently well preserved with a strong smell of naphthalene (personal observation July 2017). But there was no one in the Ornithology Department there when Dean did his research and the book is not informative about the early collectors at the museum like Chubb and Mennell who did much pioneering work. It may be just for reasons of space that he failed to mention others like Mouritz, Swynnerton, Sowerby or Marshall, who published a hundred years ago in *Ibis* and elsewhere. These collectors laid the basis for bird study in Zimbabwe.

Moving on to the museum collectors, Con Benson is mentioned as a very productive collector who named the last new species to be described from Zimbabwe (first known as Roberts' Prinia, then Briar Warbler, now Roberts's Warbler) from the Vumba. Reay Smithers was appointed Director of the National Museums of Rhodesia (as it was then) and initiated a major exploration of Zimbabwean Zoology. Michael Irwin, another prominent collector, starting in the late 1940s, joined the Museums in 1961 and this book includes a picture of a much younger Michael than we all know, collecting in Kenya in the early 1950s.

These collections are not much used nowadays except for genetic studies and by artists. The major problems facing museums currently are understaffing and underfunding, which affects not only the specimens but the documents stored there – curating and digitalization are essential. If these issues can be resolved then there is no reason why museums should not have a very useful future. There are various studies that need specimens and the author makes a plea for further limited collecting for strictly defined scientific purposes. Richard Dean has produced an interesting account but he could have said more about the early collectors in Zimbabwe.

David Ewbank

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