African Bird Club

Bulletin of the African Bird Club **Vol 13 No 1 March 2006**

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African Bird Club

The African Bird Club aims to:

- provide a worldwide focus for African ornithology
- encourage an interest in the conservation of the birds of the region
- liaise with and promote the work of existing regional societies
- publish a twice-yearly colour bulletin
- encourage observers to visit lesser known areas of the region
- encourage observers to actively search for globally threatened and near-threatened species
- run the ABC Conservation Programme

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The Bulletin of the African Bird Club

The Bulletin of the ABC provides a forum for news, letters, notices, recent publications, expedition results, reviews and interim publication of studies on African birds by contributors from throughout the world. Publication of results in the Bulletin of the ABC does not preclude publication of final results as journal papers either by the ABC or elsewhere. No material should, however, be submitted simultaneously to the *Bulletin of the ABC* and to any other publication.

Brief notes for contributors appear elsewhere in this Bulletin and further details are available from the Editor (editor@africanbirdclub.org).

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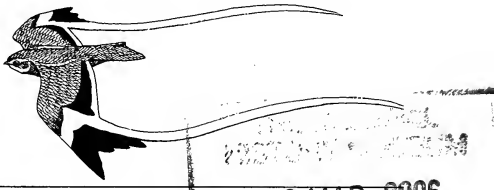

News & Comment

Front cover plate
Egyptian Plover *Pluvianus aegyptius by Nigel Blake*

Illustrations
Claudia Donati, Pete Leonard

Photographs
Clive Barlow, John Caddick, Nigel Collar, Klaas-Douwe Dijkstra, Françoise Dowsett-Lemaire, Cas Eikenaar, Lars Dinesen, Wouter Favyets, Armine Flitti, Alain Fosse, Eduardo García-del-Rey, John High, Flemming Jensen, Frédéric Jiguet, Tasso Leventis, Alistair McInnes, Martim Melo, Laura Payne, Yvan Perré, Bill Quantrill, Colin Ryall, Valéry Schollaert, Per Smitterberg, Claire Spottiswoode, Kevin Vangs, Edwin Winkel

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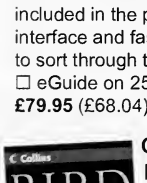

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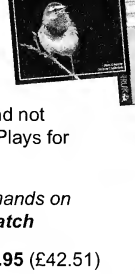

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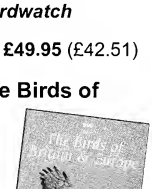

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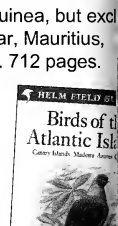

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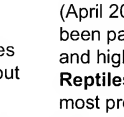

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Editorial

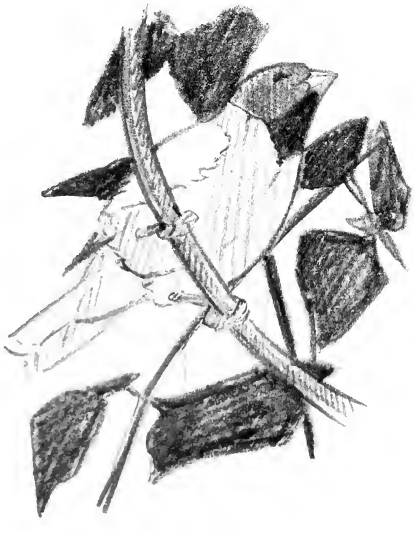
As many of you noticed, *Bull. ABC* 12 (2) was the largest yet with 112 pages, and due to the increase in submissions we have decided to switch to perfect binding. Judging by the feedback received, this appears to have been popular. We are now introducing two further changes. Firstly, after 12 years, Council decided that the ABC logo was in need of a facelift. The new logo, designed by Pete Leonard, has appeared on the website for some time, and is included in the Bulletin for the first time. Secondly, we have decided to utilise photographs on the front cover. Given the increasing difficulty of obtaining artwork and with the advent of digital photography, it was felt that the change would give us far greater scope and give the Bulletin a more modern appearance. This is not to say that ABC will not use artwork on the front cover, if a particularly worthy work is received; thus, we still anticipate using paintings occasionally, and we continue to welcome submissions of line drawings for use elsewhere in the Bulletin.

At this point, it should also be mentioned that after 12 years in the 'hot seat' Mark Andrews has elected to step down as Art Editor. Mark's contribution to the Club has been exceptional, he being one of the four original founders. Without his enthusiasm it is doubtful that ABC could have been launched. He has not only coordinated artwork for the Bulletin, but has also generously contributed designs for sales items, including the original turaco T-shirt, and has been heavily involved with organising the Club's stand at the British Birdwatching Fair. ABC thanks him for his immense contribution.

Pete Leonard, author of the recently published *Important Bird Areas in Zambia* has generously agreed to assume the broader role of Graphics Editor, and all artwork or photographs for inclusion in the Bulletin should be sent to him. We often need line drawings at short notice, particularly for Africa Round-up and Recent Reports, and would be delighted to hear from anyone who can help produce such material for future issues (see p. 8).

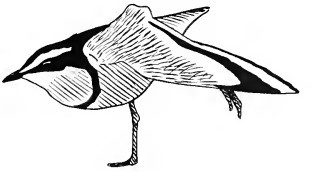
We very much hope that you like the changes to the Bulletin.

Richard Webb, on behalf of ABC Council



Oriole Finch *Linurgus olivaceus*
(Pete Leonard)

Club News



Award for ABC stand at Bird Fair

The ABC stand starred in the Conservation category at the 17th British Birdwatching Fair, held at Rutland Water on 19–21 August 2005. Of a field of *c.*50 eligible exhibitors, the ABC stand was judged third best (first prize went to a stunning display by the Dragonfly Society, with Butterfly Conservation in second place). Congratulations to Neil Thomas and Geoff Randall, who were responsible for the design and construction of the stand, supported by Moira Hargreaves who arranged the display of club merchandise (Figs. 1–2).

This was the 12th successive year that ABC has participated in the fair and again our stand served as a meeting point. Around 30% of our UK members and a good smattering of overseas members visited the stand during the three days. It was an opportunity to publicise the conservation projects supported during the past year, to exchange news of birding experiences and discuss plans for the coming year. Club merchandise included a new Martin Woodcock-designed bone china mug, which features two species of rollers and makes a fine companion piece to the two previous mug designs Martin has produced for the Club.

This year, for the first time, ABC sponsored a lecture as part of the programme of such lectures that runs the three days of the fair. Callan Cohen spoke on 'Angola's neglected mountain endemics', emphasising the critical conservation importance of the cloud forests of Angola's montane escarpment, which is home to several endangered and range-restricted species. Callan also spoke on a later occasion about the ornithological and botanical riches of the Cape Town area.

Other Africa-related themes covered by the lecture programme included Grant Reed on threats to the Okavango Delta, Trevor Jenner on birding in Ethiopia, John Gale on illustrating the forthcoming *Handbook to the Birds of Madagascar*, Peter Lawson on the birds of Mpumalanga, David Fisher on birding in Kenya, Nick Garbutt on a tour to Madagascar and David Featherbe on the endemics of SW Cape Province in South Africa. Africa also featured prominently on the many stands promoting ecotourism around the world. As well as stands representing the national tourist boards of Botswana, Uganda and The Gambia, there were others mounted by companies specialising in African destinations, such as *Birding Africa* and *Meet Us in Africa*, and most of the major bird tour companies gave prominence to their tours to African hotspots. All of them reported a lively interest in travel to the continent.

Figure 1. ABC Council members Richard Webb (Chairman), Roy Hargreaves and Neil Thomas (with Moira Hargreaves in the background, far right) manning the ABC stand (Bill Quantrill)

Les membres du Conseil du ABC Richard Webb (Président), Roy Hargreaves et Neil Thomas (avec Moira Hargreaves en arrière-plan, à l'extrême droite) s'occupant du stand du Club (Bill Quantrill)

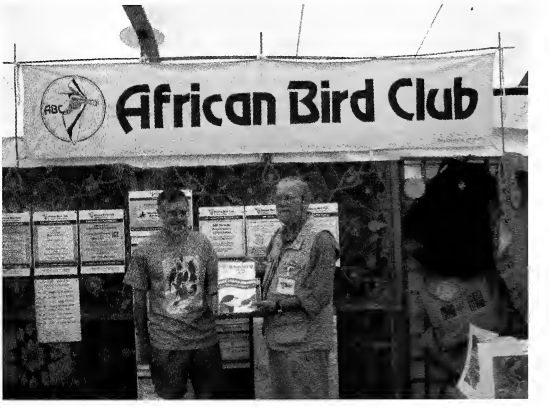


Figure 2. The architects of the ABC stand, Neil Thomas and Geoff Randall, with the plaque presented to ABC in recognition of success in the Conservation category to select the best stands at the fair (Bill Quantrill)

Les architectes du stand du ABC, Neil Thomas et Geoff Randall, avec la plaque présentée au Club en reconnaissance de la troisième place du stand dans la catégorie Conservation (Bill Quantrill)

Keith Betton

Keith, who has served on ABC Council since March 1998, is stepping down from Council at this year's AGM. His contribution to the Club has been immense: he has served as Deputy Chairman, Chairman of the Editorial Board, Meetings Officer, Information Officer and Librarian. Amazingly, he has fulfilled these roles whilst holding a high-profile job with the Association of British Travel Agencies (ABTA), the chairmanship of the Ornithological Society of the Middle East and membership of RSPB Council. Somehow, he also seems to spend plenty of time in the field. He has freely made the facilities at ABTA's offices available to the Club, not only for the AGM but also for Council meetings, saving the Club much money in the process. Although stepping down from Council, Keith has agreed to continue as Information Officer and Librarian until such time as a replacement is found. Council thanks him for his contribution to ABC and wish him well in his future activities.

Contributed by Richard Webb

ABC Conservation Tours

A new initiative for the Club last year was the launch of the ABC Conservation Tours, in collaboration with the tour company, *Birding Africa*. The idea is to visit areas of Africa outside the usual ambit of the major tour companies, with the aim of seeking neglected species and generally extending our knowledge of African avifauna. All profits from the tours go to the ABC Conservation Fund. The first such tour took place in October last year: John Caddick was one of the participants and his report is as follows.

The tour commenced at Luanda airport, Angola, on 9 October. All seven tour participants arrived on a flight from Windhoek, Namibia, where we met Michael Mills, *Birding Africa*'s tour leader. A slow drive south from the sprawling metropolis brought us into open country with beautiful views of mangrove-fringed lagoons and the Atlantic Ocean beyond. We soon crossed the bridge over the rio Cuanza and entered Quiçama National Park. The rio Longa forms the southern edge of Quiçama National Park and, at the landing stage, we boarded a twin-engine speed boat for a fast trip at dusk to Rio Longa Lodge, our base for the next two nights. Early the following morning, we returned to the landing stage on a slower vessel and were able to view a good selection of waterbirds. The surrounding area is used by local villagers for washing and fetching water supplies but that did not prevent us seeing a selection of our target species including Red-backed Mousebird *Colius castanotus*, Rufous-tailed Palm Thrush *Cichladusa ruficauda* and White-fronted Wattle-eye *Platysteira albifrons*. Along the river, in savanna thickets, we found Bubbling Cisticola *Cisticola bulliens*, Angola Batis *Batis minulla* and Golden-backed Bishop *Euplectes aureus*.

The drive south through the province of Cuanza Sul next morning was on little-used metalled roads with potholes and worn surfaces for the first 120 km, before we turned east on even rougher roads towards Gabela. We camped at a fazenda a few kilometres along a muddy track in the forest. near Gabela, where one of the highlights was Red-crested Turaco *Tauraco erythrolophus*. Our next campsite was in the Kumbira

Figure 3. Midday in the forest near Gabela (John Caddick)

Midi dans la forêt près de Gabela (John Caddick)

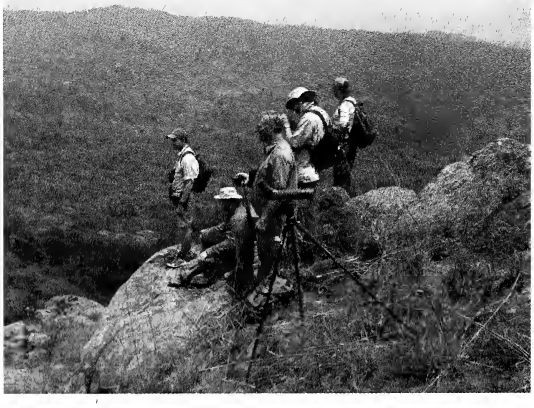


Figure 4. The rocky escarpment, home to the endemic Angola Cave Chat *Xenocopsychus ansorgei*, overlooking Kumbira Forest (John Caddick)

L'escarpement rocheux, habitat de l'endémique Cossyphe des grottes *Xenocopsychus ansorgei*, surplombant la forêt de Kumbira (John Caddick)

Forest some 10 km beyond the town of Conda, where we stayed three nights.

At dawn we set off to climb the sandy and rocky face of the escarpment. Some 350 m above the forest, one of us soon found the near-mythical Angola Cave Chat *Xenocopsychus ansorgei*. A little higher, we sat contentedly on rocks overlooking a tree-lined gully where the rest of the group had excellent views of a single bird in bright sunshine. This proved a very productive viewpoint (Fig. 4) and we also saw a pair of Miombo Rock Thrush *Monticola angolensis*, a Damara Rockjumper *Chaetops pycnopygius*, several Oustalet's *Cinnyris oustaleti* and Montane Double-collared Sunbirds *C. ludovicensis*, and a party of Dusky Twinspots *Euschistospiza cinereovinacea*. The swifts nesting in caves here appeared different from African Black Swift *Apus barbatus* and were perhaps Fernando Po Swifts *A.* (*barbatus*) *sladinae*. A very happy group descended for a quiet afternoon.

The focus of the next day was Kumbira Forest (Fig. 3) and this did not disappoint despite the slash-and-burn forest clearance to make way for banana and coffee. Michael's knowledge allowed us to see the special and endemic birds of the forest, the highlights being Gabela Akalat *Sheppardia gabela*, Pulitzer's Longbill *Macrosphenus pulitzeri*, Gabela *Laniarius amboimensis*, Monteiro's *Malacanotus monteiri* and Perrin's Bush-shrikes *Telophorus* (*viridis*) *viridis*, Pale-billed Firefinch *Lagonosticta* (*rubricata*) *landanae* and Black-faced Canary *Serinus capistratus*. The plan for the following day necessitated another dawn start. On a very rough track en route to Bimbe village, one vehicle flushed an adult pair and a chick of Grey-striped Francolin *Francolinus griseostriatus*, the latter obligingly continuing to feed on the track for those travelling in the other vehicle. Around Bimbe, we spent several hours watching eight Gabela Helmet-shrikes *Prionops gabela* in the tallest trees of what was essentially an area of grass and scrub. In the same area, we had excellent views of Böhm's Spinetail *Neafrapus boehmi* and Pale-olive Greenbul *Phyllastrephus fulviventris*.

Following a final night at Rio Longa Lodge, seven very contented birdwatchers left Angola. Fourteen endemics and seven range extensions had been recorded, along with a host of other species. We had enjoyed ourselves immensely and seen a little of the people and a country that for so long had been too dangerous to visit. Thanks are due to Michael Mills and *Birding Africa* for organising this wonderful tour.

Visit www.africanbirdclub.org/countries/Angola/introduction.html to learn more about Angola, and consider joining a future ABC conservation tour.

Contributed by John Caddick

ABC powerpoint presentation

A powerpoint presentation about the Club is now available, including a brief description of the attractions of Africa to ornithologists, a history of the Club, its main activities (producing the Bulletin, promoting conservation, extending our membership, particularly in Africa, and developing the website), and a gallery of African birds, with examples of all of the main families special to the continent. The presentation was launched at the annual conference of the Scottish Ornithologists Club, last October, which had an international theme under the title 'Birds across the Continents'. Other talks covered ringing for conservation across the world, bird migration, genetics and climate change, raptor migration across the Strait of Gibraltar, and birding in Chile, Antarctica and North America. If your local bird club or wildlife society could use the presentation at one of their meetings please contact the Club's Information Officer to arrange a suitable date.

ABC website

Development of the website has continued apace with the launch, in August 2005, of the African Bird Image Database (AFBID: http://birdquest.net/afbid/), created by *Bird Explorers* in collaboration with ABC and *Birding Africa* to bring together quality photos of as many bird species from Africa as possible. It covers the same geographical area as the Club and seeks to promote awareness and conservation of the continent's birdlife. The site has an easy-to-use interface: users can view the most recent images or search for particular families or individual species. Photographers can register and upload their own African bird photos. The site clearly filled a vacant market niche as within three months of its launch 117 photographers had submitted 2,314 images of 930 species. AFBID can also be accessed from the main ABC website at www.africanbirdclub.org. This continues to be a popular resource which in the six months to October 2005 averaged 36,000 page views from 8,200 unique visitors per month. The site's popularity has also helped the ABC Conservation Fund by attracting new sponsors and generating a stream of advertising revenue. Your comments and suggestions on the website and ideas for future developments, and contributions in the form of site visits, bird lists and photographs, especially from the less frequently visited countries, can be sent to info@africanbirdclub.org

Contributed by John Caddick

Index to *Bull. ABC*

Bob Dowsett has prepared an index for volumes 1–12 (1994–2005) of *Bull. ABC*. The work is subdivided into separate indices covering scientific names, authors and contents, and countries featured in Recent Reports. In sum, a valuable resource. Copies are available electronically, as .pdf, free on demand, from Dowsett@aol.com. A different-format index, prepared by Ron Demey, covering the first ten volumes of the Bulletin is also available, and can be downloaded from the ABC website by following the appropriate links.

Call for photos and artwork

Photographers and artists

We are keen to include a wider variety of black-and-white illustrations and photographs in the Bulletin. To achieve this we are seeking to establish a pool of willing artists and photographers that we could contact periodically for the occasional contribution. If you would like to join the pool of ABC artists and photographers, or know somebody who would like the opportunity to have their work published, please contact the Graphics Editor, Pete Leonard, via pete@pleonard3.wanadoo.co.uk. There are no obligations if you do put your name forward and you will be able to dictate how frequently or infrequently you contribute, but this is your chance to bring the pages of the Bulletin alive.

ABC Bulletin cover images

The digital photography revolution has led to a huge increase in the number of people taking high-quality bird images and ever-faster internet links allow us to move these around the virtual world in an instant. For these reasons, we have decided to start using photographs on our front covers. If you have any special images you would like to have considered for a Bulletin cover, please contact the Graphics Editor, Pete Leonard, via pete@pleonard3.wanadoo.co.uk. This change will not preclude the occasional use of artwork, should suitable material be received.

Corrigenda

Bull. ABC 12 (2)

The caption (p.103) to the map, Figure 1, on p.102, ascribes incorrect colours to the ranges of the different taxa. The correct caption should read: Distribution of *Batis e. erlangeri* (pale grey), *B. e. congoensis* (dark grey), *B. m. minor* (black), *B. m. suahelicus* (red) and *B. perkeo* (green). Figures 2–3 on pp.102–103 show the taxa in the following order (from left to right and from top to bottom): *Batis e. congoensis, B. perkeo, B. e. erlangeri* and *B. m. minor*. Figs. 4–5 show the aberrant specimen RMCA 63028 from Lusambo (top) and a normal *B. e. erlangeri* (bottom). On p.105, the reference to Louette (2005) is incomplete. It should read: Louette, M. 2005. Conservation priorities and geographical variation in flycatchers (Aves: Platysteiridae) in the Democratic Republic of Congo. In Huber, B. A., Sinclair, B. J. & Lampe, K.-H. (eds.) *African Biodiversity. Molecules, Organisms, Ecosystems*. New York: Springer.

Bull. ABC 12 (1)

On p.55, it is stated that the Mascarene Grey White-eyes *Zosterops borbonicus* were feeding on the New Zealand species *Sophora tetraptera* (which is unknown from the Mascarenes), but in fact the plant in question is the Réunion endemic *Sophora denudata*, as confirmed by reference to Polhill, R. M. 1990. *Flore des Mascareignes. 80. Légumineuses.* Mauritius, Paris & London: MSIRI, ORSTOM & Royal Botanical Gardens Kew. We thank Anthony Cheke for pointing out this error.

Africa Round-up

General

Flamingos and grebes are sister taxa

The question as to which birds are the closest relatives of flamingos has long puzzled biologists. Researchers have suggested various relationships, from ducks and geese (Anseriformes) over storks and herons (Ciconiiformes) to waders (Charadriiformes). Recent genetic and morphological evidence, however, indicate that flamingos are most closely related to grebes (Podicipediformes) and that the grebe–flamingo linkage is one of the best supported among modern birds. The name Mirandornithes has been proposed as a name for this clade.

Sources: Ibis *147, pp 612–615*
Zool. J. Linn. Soc. *140, pp 157–169*
Proc. Roy. Soc. Lond. B *268, pp 1345–1350*

Recommended taxonomic changes

A recently published report of the Taxonomic Subcommittee of the British Ornithologists' Union Records Committee contains recommendations relating to the taxonomy of some birds species that also occur in the ABC region, including the following. Three forms of Little Shearwater *Puffinus assimilis* breeding in the tropical and subtropical parts of the Atlantic Ocean (*P. a. lherminieri*, *P. a. baroli*, *P. a. boydi*) appear to form a monophyletic group which is not closely related to the other forms of the complex (including nominate *P. a. assimilis*). The former taxa are best treated as two species: Macaronesian Shearwater *P. baroli* (polytypic, with subspecies *baroli* and *boydi*) and Audubon's Shearwater *P. lherminieri* (monotypic). The taxonomic status of *P. b. boydi* remains under consideration pending study of recently obtained sound-recordings of that taxon (see also *Bull. ABC* 12: 8).

Two *Hieraaetus* eagles, Booted Eagle and Bonelli's Eagle, formerly *Hieraaetus pennatus* and *H. fasciatus*, become *Aquila pennata* and *A. fasciata* respectively (see also *Bull. ABC* 12: 93). The genus of four terns, previously included in *Sterna*, changes as follows: Caspian Tern becomes *Hydroprogne caspia*, Sooty and Bridled Tern *Onychoprion fuscata* and *O. anaethetus* respectively, and Little Tern *Sternula albifrons*. In swallows, Eurasian Crag Martin becomes *Ptyonoprogne rupestris* and Red-rumped Swallow *Cecropis daurica* (both were previously included in *Hirundo*). Finally, it is recommended that the form *madeirensis*, previously considered a subspecies of Firecrest *Regulus ignicapilla*, be treated as a separate, monotypic, species, Madeira Firecrest *R. madeirensis*.

Source: Ibis *147, pp 821–826*

Cape Verde Kite: species or subspecies?

The unresolved question of whether to treat the Cape Verde Kite *Milvus milvus fasciicauda* as a race of the Red Kite *M. milvus* or as a separate species has probably slowed conservation efforts to save it. Although widespread in the Cape Verde Islands until the 1950s, it was progressively replaced by the Black Kite *Milvus migrans* through competition and/or hybridisation. Both kites have declined dramatically in recent years and in 1999 just two pure-looking Cape Verde Kites were found on Santo Antão. In an attempt to save the latter from extinction, a search of the islands was conducted and five unidentified kites were located and taken into captivity in 2002. In order to assess the systematic status of the Cape Verde Kite and to identify the five captured individuals, a genetic analysis was conducted of specimens of Black Kite (of several subspecies), Red Kite, seven museum specimens of Cape Verde Kite collected between 1897 and 1924 (including the type) and the five kites caught in 2002. The results, published in 2005, suggest that the Cape Verde Kite does not constitute a distinct evolutionary unit relative to Red Kite and that the colonisation of the Cape Verde Islands was probably recent. The study also revealed that all the five kites captured in 2002 have Black Kite mitochondrial DNA. The results do not permit determination as to whether these birds are pure Black Kites or are hybrids or intergrades between Black Kite and Red Kite, but do seem to exclude that they can be pure *fasciicauda*. According to this study, the Cape Verde Kite is not a species and is probably extinct.

Sources: Birding World *18, p 486*
Proc. Roy. Soc. Lond. B. *272, pp 1365–1371*

Black Kite: two or more species?

The genetic study conducted to assess the systematic status of Cape Verde Kite *Milvus m. fasciicauda* (see above) included 24 specimens of Black Kite *Milvus migrans* from the major part of the species' global range and included the subspecies *migrans* and *lineatus* (Eurasia), *aegyptius* (north-east Africa and Arabia), *parasitus* (sub-Saharan Africa), and *affinis* and *govinda* (southern Asia and Australia). Some of these forms are sometimes treated as separate species, for example Yellow-billed Kite (*aegyptius*, including *parasitus*). The results of the study support the recognition of at least two species in the Black Kite complex, but also show that a correct systematic treatment will not be straightforward. Three divergent lineages were found: (1) Eurasian and Australasian Black Kite (subspecies *migrans*, *affinis* and *lineatus/govinda*),

(2) the widespread African Yellow-billed Kite (*parasitus/aegyptius*) and (3) southern African and Madagascan *parasitus*. All Eurasian and Australasian specimens form a monophyletic group (a group of common ancestry). Remarkably, the five kites captured on the Cape Verde Islands in 2002 group with the *migrans* clade and not with the African specimens, although Black Kites from the Cape Verdes often have been considered to be *parasitus*.

The African specimens of Black Kite form two well-supported clades that are highly divergent from other Black Kites. Three specimens from South Africa and Madagascar form one clade, and ten specimens from sub-Saharan Africa and Yemen form the other. These two African clades differ as much from each other as they do from Eurasian Black Kite and Red Kite *Milvus milvus*. Surprisingly, the results of the study suggest that one clade of the African Black Kite is the sister group of Red Kite, whilst the other is the most anciently diverged lineage of kites and the sister group of all the other kites. However, before accepting that there are two distinct evolutionary units in Yellow-billed Kite, more data are required. For the time being, the best option might be to recognise Yellow-billed Kite *Milvus aegyptius* as a separate species, with *parasitus* as a subspecies. This should be considered as a first step and certainly not as the final word on the systematics of the Black Kite complex.

Sources: Birding World *18, p 487–488*
Proc. Roy. Soc. Lond. B. *272, pp 1365–1371*

Relationships among large falcons

The phylogeographic history of the Lanner Falcon *Falco biarmicus* and phylogenetic relationships among hierofalcons (*Falco biarmicus, F. cherrug, F. jugger* and *F. rusticolus*) have recently been investigated using mitochondrial DNA sequences. In addition, samples of *Falco mexicanus* were analysed to elucidate its phylogenetic relationships to the hierofalcons. The sequence data indicate that the latter species is more closely related to Peregrine Falcon *Falco peregrinus* than to the hierofalcons. In the DNA-based trees and in the maximum parsimony network, all hierofalcons appear closely related and none of these species is a monophyletic group. The close relationships among haplotypes suggest that the hierofalcon complex is an assemblage of morphospecies that radiated rather recently. Based on the high intraspecific diversity found within *F. biarmicus* it is assumed that the complex has an African origin. The observed pattern of haplotype distribution in the extant species may be due to incomplete lineage sorting of ancestral polymorphisms and interspecific gene flow through hybridisation.

Source: J. Zoological Systematic & Evol. Res. *43(4)*

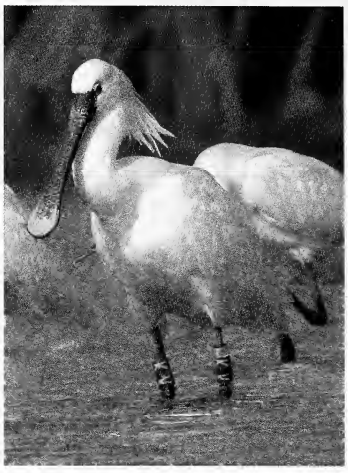
Brightly-coloured birds: not necessarily easy prey

How do brightly-coloured, highly conspicuous birds avoid falling prey to avian predators? This question, which has troubled scientists for a long time, has recently been tentatively answered. Swedish researchers discovered that most avian predators use a slightly different range of light from songbirds. The theory is that raptors are not 'tuned in' to the spectrum of light reflected by songbirds' feathers and therefore have difficulty picking out a bright patch of colour on a bird against a background of different-hued leaves, dappled light, etc. Thus birds of prey would not see them as well as other songbirds—and humans—do.

Sources: Proc. Natl. Acad. Sci. USA *102, pp 6391–6394*
Africa—Birds & Birding *10(4), p 15*

Colour-ringed Spoonbills

For many years Spoonbills *Platalea leucorodia* from the West European breeding population have been colour-ringed in the Netherlands, France and Spain. Readings of colour rings have yielded much valuable information concerning the species in its wintering areas in Morocco,



Colour-ringed Eurasian Spoonbill *Platalea leucorodia* (Alain Fosse)

Mauritania and Senegal, about life expectancy and the importance of these areas for juveniles, which do not return to European colonies until the age of three or four years. In recent years, colour ringing has commenced in the Central European breeding grounds: in Italy (since 1989), Greece (2000–01) and in the Danube basin (since 2003); providing much new information about the staging and wintering areas of these birds. The main migratory routes seem to be (a) through the Adriatic to wintering grounds in the tidal areas of Tunisia and Libya, with a few crossing the Sahara to the Inner Niger Delta; and through south-east Europe and the Levant to wintering areas along the Nile Valley, as far south as Sudan.

Observers are requested to report sightings of any colour-ringed birds they may find: Italian colour rings are on one leg only; they are black, with three or four white letters or numbers, the first digit normally being an 'I' with heavy serifs at the top and bottom of the letter; they should be reported to Nicola Baccetti at the Italian National Institute for Wild Fauna (INFS) at nicola.baccetti@infs.it. Rings from other countries are of the type used in the Netherlands, with a two-letter/number code, always reading down, with a ring on each leg, the

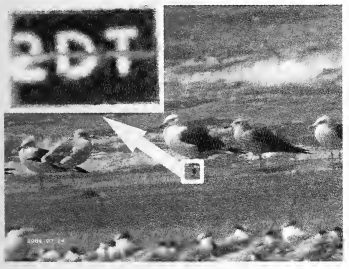
same inscription on each ring, often on different-coloured rings. It is extremely important to note the position of the metal ring, i.e. whether it is above or below the colour ring, and whether it is on the right or left leg. Information on sightings should be sent to the coordinator of the International Spoonbill Working Group, Otto Overdijk, at o.overdijk@wxs.nl.

Source: Mike Smart in litt. *December 2005*

Please photograph ringed birds

Digiscoping has suddenly increased the possibilities of reading and recording ring numbers on birds in the field. Furthermore, it is not always necessary to get a clear and crisp shot of a ring. Recently, a ringed Kelp Gull *Larus dominicanus* was photographed in The Gambia by Clive Barlow and although the ring seemed initially unreadable, some careful 'photo-shopping' enabled the ring to be read easily and the origins of the bird (Senegal) established. If you are fortunate enough to photograph a ringed bird in Africa and you are unsure where to send the pictures, please forward them to ABC.

Source: Pete Leonard in litt. *January 2006*



Ringed Kelp Gull *Larus dominicanus* with ring detail (inset) (Clive Barlow/Pete Leonard)

Mediterranean Action Plan for Birds

The UNEP Mediterranean Action Plan (MAP) brings together 21 countries around the Mediterranean, operating within the framework of the Barcelona Convention for the Protection of the marine environment and the coastal region of the Mediterranean. They adopted, in 1995, a 'Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean' which includes in its Annex II a 'List of Endangered or Threatened Species'. This list includes 15 birds and at a conference in Catania, Sicily, in November 2003, an Action Plan for the conservation of these species was adopted, following similar plans on monk seals, marine turtles, cetaceans and marine vegetation. The Action Plan for Birds notes initiatives taken by bodies such as BirdLife International partners in Mediterranean countries, WWF, IUCN, Medmaravis and Tour du Valat, which all contributed to the development of the text; the plan is administered by the Regional Activities Centre for Special Protected Areas (RAC/SPA) in Tunis. The 15 birds include a variety of species of differing status, some globally endangered, some whose breeding area is concentrated on rocky Mediterranean islands, some found mostly in beaches and coastal lagoons, as follows: Cory's Shearwater *Calonectris diomedea*, Mediterranean Shearwater *Puffinus yelkouan*, European Storm-petrel *Hydrobates pelagicus*, European Shag *Phalacrocorax aristotelis*, Pygmy Cormorant *Phalacrocorax pygmeus*, Great White Pelican *Pelecanus onocrotalus*, Dalmatian Pelican *Pelecanus crispus*, Greater Flamingo *Phoenicopterus ruber*, Osprey *Pandion haliaetus*, Eleonora's Falcon *Falco eleonorae*, Slender-billed Curlew *Numenius tenuirostris*, Audouin's Gull *Larus audouinii*, Lesser Crested Tern *Sterna bengalensis*, Sandwich Tern *S. sandvicensis* and Little Tern *S. albifrons*. A survey of wintering birds in Libya was organised in January 2005 under the Action Plan and a symposium on the ecology of Mediterranean seabirds was held in Barcelona in November 2005. More details can be found on the RAC/SPA website at www.rac-spa.org.

Source: Mike Smart in litt., *December 2005*

The validity of some north-east African birds' names

Those with a serious interest in the sometimes murky waters of avian nomenclature will enjoy an extraordinarily detailed dip, by Frank Steinheimer, into the names of 23 birds collected in north-east Africa by Eduard Rüppell, and described by either Rüppell or Philipp Jakob Cretzschmar. The results are extremely interesting but the reading is not for the faint-hearted.

Source: Bull. Br. Ornithol. Cl. *125, pp 164–211*

More about names: Verreaux's or Verreauxs' Eagle?

Birds carrying the scientific name *verreauxi* or *verreauxii* are found in seven avian genera. There were two Verreaux brothers, Edouard and Jules, both 19th-century French naturalists, collectors and natural history dealers. In six cases, the birds were named after Jules, the older of the two brothers. In the case of *Aquila verreauxi*, however, the bird was named after both brothers. The correct spelling of the English name is thus Verreauxs' Eagle, not Verreaux's Eagle.

Source: Africa—Birds & Birding *10(4), p 18*

North Africa

New Ramsar sites in Morocco

Morocco has recently designated no fewer than 20 new Ramsar sites throughout the country. Together with the four existing sites, this brings the total area of wetlands covered to more than 270,000 ha.

Source: World Birdwatch *27(3), p 3*

Recent news from Algeria

Amina Fellous, an Algerian ornithologist working in the governmental Agence Nationale pour la conservation de la Nature based in Algiers, and who is producing inventories and monitoring the country's fauna, especially its threatened species, has drawn our attention to a number of recent publications on Algerian birds.

These include a paper on the introduced arrival and subsequent establishment of Rose-ringed Parakeet *Psittacula krameri* in Algeria; Yellow-legged Gull *Larus michahellis* breeding in a number of urban areas in the country, including at inland sites; notes on seven species of seabirds observed in the region of Béjaia; and a review of historical records of Bald Ibis *Geronticus eremita* in Algeria. Amina also informs us of plans to establish an Algerian bird group and a project to set up a ringing centre in Algeria, as well as the availability of a discussion forum on Algerian birds, at: http://fr.groups.yahoo.com/group/oiseauxalgerie/. We wish Amina and her colleagues well in their efforts.

Sources: Aves *42, pp 257–262*
Alauda *73, pp 195–200*
Orn. Algerica *3, pp 35–41*
IAGNBI Newsletter *3, pp 48–49*

West & Central Africa

Dorst's Cisticola, a species conumdrum

Described as recently as 1991, Dorst's Cisticola *Cisticola dorsti* has since been found at a number of localities between The Gambia and Cameroon and Chad. Although the bird's describers were able to satisfactorily demonstrate the 'new' form's distinctiveness from the nominate form of Red-pate Cisticola *C. ruficeps*, they were unable to compare it with the Upper Guinean form *C. r. guinea*, which until recently was unknown vocally. New information on the latter form has permitted reanalysis of this complex situation, by Bob & Françoise Dowsett and Nik Borrow. The remarkable coincidence between specimen locations for *C. r. guinea* and sight and sound-recording localities of *C. dorsti*, and the first vocal data for the former taxon, indicate that these two are conspecific with the name *guinea* taking precedence. However, the authors recommend that Dorst's Cisticola be retained as the vernacular name for *C.* (*r.*) *guinea*, which they consider to be amply distinguishable and hence specifically distinct from nominate *ruficeps*, thus leading to the maintenance of two species within this group of taxa.

Source: Bull. Br. Ornithol. Cl. *125, pp 305–313*

Ibadan Malimbe *Malimbus ibadanensis* (Tasso Leventis)

Surveys of the Ibadan Malimbe...

The globally threatened Ibadan Malimbe *Malimbus ibadanensis* is currently classified as Endangered, it being restricted to a relatively tiny corner of south-west Nigeria. Recent surveys for the species have found it at a total of 19 localities (of 52 that were searched), all clustered within a small part of the former range. The authors of the study suggest that the current population of the species might number as few as *c.*2,500 individuals and urge conservation action to save as many of the currently occupied sites as possible, noting in particular that mean density generally decreases the smaller the forest patch and that more isolated fragments are unlikely to be occupied.

Source: Bird Conserv. Intern. *15, pp 275–285*

...and Rock Firefinch

Also in Nigeria, the range-restricted Rock Firefinch *Lagonosticta sanguinodorsalis* was surveyed, principally within a protected area, on the Jos Plateau in mid 2002, where *c.*70 birds are present. The species appears to be strongly associated with inselbergs and rocky outcrops, but shows no apparent positive response to the protection of sites within its range, as population densities appeared similar between protected and unprotected areas.

Rock Firefinch *Lagonosticta sanguinodorsalis* (Tasso Leventis)

Source: Bird Conserv. Intern. *15, pp 287–295*

New data on the birds of DR Congo

Writing in the most recent issue of *Bull. Br. Ornithol. Cl.*, Paul Herroloen provides much 'new', previously unpublished or rather obscurely published data on the birds of the Democratic Republic of Congo. His own observations in the country were all made in 1950–60. Data for 67 species are presented, including one addition to the country's list, along with much novel information on breeding, distribution, feeding and other topics. Many of these data were 'missed' by *Birds of Africa*. Those with an interest in Central African birds will find the paper to be an essential reference.

Source: Bull. Br. Ornithol. Cl. *126, pp 19–37*

Coastal waterbird census in Sierra Leone

In January–February 2005, the first more or less complete winter census of waterbirds on Sierra Leone's coast was undertaken by the Working Group International Waterbird and Wetland Research (WIWO) in cooperation with The Conservation Society of Sierra Leone. Five wetland areas were investigated: the Scarcies estuary, Sierra Leone River estuary, Yawri Bay, Turtle Islands and Sherbo Island. A total of 92,454 waterbirds of 87 species was logged and more than 100,000 were estimated to be present in brackish and marine wetlands. All the areas visited met the criteria to be listed as Important Bird Areas (IBAs). The most abundant species were Curlew Sandpiper *Calidris ferruginea* (24,855 birds counted), Common Redshank *Tringa totanus* (8,171), Common Ringed Plover *Charadrius hiaticula* (7,398), Grey Plover *Pluvialis squatarola* (4,555), Royal Tern *Sterna maxima* (4,316), Whimbrel *Numenius phaeopus* (4,038), Bar-tailed Godwit *Limosa lapponica* (3,139) and White-faced Whistling Duck *Dendrocygna viduata* (3,121). More than 5% of the flyway population of the following three species was present: Lesser Crested Tern *Sterna bengalensis* (13.4% of the population), Gull-billed Tern *Gelochelidon nilotica* (6.4%) and Little Tern *Sterna albifrons* (5.2%). Four species were apparently reported from the country for the first time: Great White Pelican *Pelecanus onocrotalus,* Eurasian Spoonbill *Platalea leucorodia*, Northern Shoveler *Anas clypeata* and Terek Sandpiper *Xenus cinereus.*

Source: www.projects.wiwo.org/

White-faced Whistling Ducks *Dendrocygna viduata* (Pete Leonard)

Conservation programme for Gola Forest

Some 75,000 ha of Gola Forest, located in eastern Sierra Leone at the border with Liberia and one of the most important areas of rainforest remaining in West Africa, will be managed by BirdLife in conjunction with seven local chiefdoms and the government. The Gola Forest Conservation Concession programme was launched by the country's president on 4 June 2005. No logging will be permitted and more than 40 local people are being appointed to patrol the reserve and run education programmes. Gola Forest is an Important Bird Area (IBA) where 274 bird species have been recorded, including White-breasted Guineafowl *Agelastes meleagrides*, Rufous Fishing Owl *Scotopelia ussheri*, Western Wattled Cuckoo-shrike *Lobotos lobatus*, Nimba Flycatcher *Melaenornis annamarulae*, White-necked Picathartes *Picathartes gymnocephalus* and Gola Malimbe *Malimbus ballmanni*. Mammals of global conservation concern occurring in the reserve include Pygmy Hippopotamus *Hexaprotodon liberiensis*, Zebra Duiker *Cephalophus zebra* and Jentink's Duiker *C. jentinki.*

Source: www.birdlife.org/news/news/2005/06/gola.html

New funding for Liberia's Sapo National Park

A $975,000 grant from the Global Environment Facility (GEF) via the World Bank is enabling Fauna & Flora International (FFI) to significantly increase its support to Sapo National Park, still one of the best-preserved lowland rainforests in the Upper Guinea Forest block despite Liberia's turbulent recent past. FFI began working in the region in 2000, providing support to the management of the park. Re-establishing effective management has been difficult. Former combatants returning from the war and displaced civilians had settled inside the park, and only in August 2005 did the last of these illegal residents move on. The 130,747-ha park, located in south-east Liberia, is an Important Bird Area where several globally threatened bird and mammal species occur, e.g. White-breasted Guineafowl *Agelastes meleagrides*, White-necked Picathartes *Picathartes gymnocephalus*, Gola Malimbe *Malimbus ballmanni* and Pygmy Hippopotamus *Hexaprotodon liberiensis.*

Source: CEPF E-News *December 2005*

Two new parks in Cameroon

The government of Cameroon has declared two new national parks in the extreme south-east of the country, to preserve some of the last remaining intact forested areas of the Congo Basin. Boumba-Bek and Nki National Parks cover more than 600,000 ha and have never been logged, but these pristine sites, accessible only by boat, are surrounded by logging concessions. Both are Important Bird Areas (IBAs) in which *c.*260 bird species have been recorded, including a significant number of Guinea-Congo Forests biome species.

Source: Africa Geographic *13, p 10*

Atlantic Islands

First record of melanistic Blackcap on Flores, Azores

A melanistic male Blackcap *Sylvia atricapilla* of the local subspecies *gularis* was observed for the first time on Flores, the westernmost island of the Azores archipelago, in

May 2005. The record has been documented, with the first photographs to be made of this form in the field, in a recent issue of *Limicola*. The bird had an entirely black head, neck and upper breast, a contrasting olive-brown tinge to the mantle and flanks, and a grey rump.This partially melanistic form of Blackcap occurs on Madeira and the Canaries (subspecies *heineken*), and the Azores, where it was known from the eastern and central islands. Although *gularis* also occurs on the Cape Verde Islands, no melanistic individuals have ever been recorded there.

Source: Limicola *19, pp 217–224*

New Spanish-language publications on Macaronesia

Published by the Centro de Educación Ambiental Municipal (CEAM) de La Orotava, in the Canary Islands, *El Indiferente* is a Spanish-language magazine, in full colour, principally devoted to the wildlife and conservation of natural resources in the north-east Atlantic islands. The latest issue of which we have seen a copy contains a number of articles concerning birds, including the avifauna of the Orotava Valley, birds of the Azores, endemic birds of the Cape Verdes, and the imperilled conservation status of the Egyptian Vulture *Neophron percnopterus* in the Canaries. More information about *El Indiferente* and the CEAM can be obtained by e-mailing ceam.orotava@cabtfe.es or by visiting www.villadelaorotava.com. Also of interest to those working in or visiting Macaronesia will be the report, in the Spanish magazine *La Garcilla*, of the discovery of an apparently new subspecies of Blue Tit *Parus caeruleus* on Gran Canaria, in the Canaries.

Sources: La Garcilla *123, pp 12–15;* El Indiferente *17*

New reserve for Houbara Bustard

SEO/BirdLife (BirdLife in Spain) has purchased 209 ha of well-preserved steppe habitat on Fuerteventura, in the Canary Islands, to create a reserve for the globally threatened Houbara Bustard *Chlamydotis undulata*. The population of the species' *fuerteventurae* race, which is endemic to the archipelago, numbered only 500 birds in the mid 1990s, with 241 on Fuerteventura. Sixteen were found in the presently protected area in the winter 2004/2005 census. The new reserve is also home to a pair of the Endangered and endemic Fuerteventura Chat *Saxicola dacotiae* and to the endemic races of Stone-curlew *Burhinus oedicnemus insularum* and Lesser Short-toed Lark *Calandrella rufescens polatzeki*. Other species include Cream-coloured Courser *Cursorius cursor*, Black-bellied Sandgrouse *Pterocles orientalis*, Berthelot's Pipit *Anthus berthelotii* and Trumpeter Finch *Bucanetes githagineus*.

Source: www.birdlife.org/news/news/2005/06/houbara.html

Status of Raso Lark in 2003

The population of the Critically Endangered Raso Lark *Alauda razae*, endemic to Raso islet, in the Cape Verdes, was estimated at 93–103 birds in January 2003 and at 76–87 birds in November 2003. Of these, only 25–35% were females. This is within recorded historical limits of between ten and *c.*100 pairs. In November, birds were breeding and a total of 13 nests built by eight pairs was found. Nest survival was extremely low due to high rates of egg predation: all nests but one had been predated by the time the researchers left the island. The Cape Verde Giant Gecko *Tarentola gigas* was considered the most likely nest predator. Mammalian predators were absent and there was no evidence of deliberate persecution or of habitat disturbance. High rates of nest predation may be sustainable, as Raso Lark and Giant Gecko have lived together for thousands of years, though trends in nest predation are unknown. At present, the main threats to the species' long-term survival are climate change and extreme natural events.

Source: Bird Conserv. Intern. *15, pp 165–172*

East Africa

Udzungwa Partridge: one or two species?

A paper published in October 2005 arguing the case to raise a subspecies of the Udzungwa Partridge *Xenoperdix udzungwensis* to species status, appeared in the first of four double-sized special editions of the *Journal of East African Natural History* that focus on research and conservation work in the Eastern Arc Mountains and Coastal Forests of Tanzania and Kenya. The journal's extensive archive, stretching back to the first edition in 1910, will gradually be made available online over the next three years. Some abstracts of recently published articles can already be seen at the journal's website, http://www.naturekenya.org.

Source: CEPF E-News *November 2005*

New Ramsar sites in Uganda...

The Ugandan government has designated nine new Ransar sites, bringing the country's total number of wetlands covered by the Convention to 11. All are Important Bird Areas (IBAs) holding significant waterbird congregations.

Source: World Birdwatch *27(4), p 7*

... and in Tanzania

The Rufiji-Mafia-Kilwa wetland has become Tanzania's fourth Ramsar site. The area covers the delta of the Rufiji River, Mafia Island and surrounding area, and the Songo-Songo Archipelago to the south with adjacent waters, including the Mafia Channel and waters between Mafia and Songo-Songo. The Rufiji River delta and its coastal tributaries form the largest tidal mangrove wetland on the eastern seaboard of the continent. It is an Important Bird Area, where more than 1% of the biogeographical populations of Crab Plover *Dromas ardeola*, Curlew Sandpiper *Calidris ferruginea*, Terek Sandpiper *Xenus cinereus*, Gull-billed Tern *Gelochelidon nilotica*, Lesser Crested Tern *Sterna*

bengalensis and Saunders's Tern *S. saundersi* have been found.
Source: Africa Geographic *13(3), p 18*

Indian Ocean islands

The generic assignment of some Mascarene pigeons

Recently (2001) published mtDNA work on pigeons by Kevin Johnson and co-workers has led to a rethink in the systematics of a number of Columbidae, in particular all of the New World pigeons formerly placed in the genus *Columba* are now frequently considered better assigned to the genus *Patagioenas*. Although genetic data for African Columbidae are still incomplete, Anthony Cheke has recently proposed an alternative settlement for four pigeons found in the Mascarenes whose generic assignment has consistently proved problematic and whose mtDNA was sampled by Johnson *et al.* Cheke recommends that the Mauritius Pink Pigeon and Malagasy Turtle Dove be assigned to the genus *Nesoenas*, rather than the genera *Columba* and *Streptopelia*, respectively, and that the Spotted Dove and Palm Dove (which have traditionally been placed in *Streptopelia*) also be afforded their own genus, *Stigmatopelia*.
Source: Bull. Br. Ornithol. Cl. *125, pp 293–295*

Malagasy Turtle Dove *Streptopelia picturata* (Per Smitterberg)

Birds sense forthcoming tsunami

Wardens of Cousin Island Special Reserve, Seychelles, report that on the morning the Asian tsunami hit, the island's ground-nesting seabirds had flown off, the giant tortoises had left the beach and unusual numbers of ghost crabs were inside the forest. The animals seem to have sensed the forthcoming tidal wave.
Source: World Birdwatch *27(3), p 3*

News from Réunion

We have recently received copies of the bulletin of the Société d'Etudes Ornithologiques de la Réunion, *Le Taille-Vent*, dating back to 1997, as well as copies of their newsletter, *Le Chakouat*. These publications present much valuable information concerning the work of the society on the island's birds, including some of the endemics, as well as news of conservation and other activities. Entirely in French, the work of the society will clearly be of interest to anyone fascinated by the avifauna of this (and the other) west Indian Ocean islands. Information concerning the society and its publications can be obtained by sending an e-mail to: contact@seor.fr.

Major threat of Mauritius highway averted

A 18-month campaign for the protection of an Important Bird Area has ended in a victory for conservation, as plans for a road that would have cut through some of the last remaining good-quality forest in south-eastern Mauritius (see *Bull. ABC* 12: 96) have been shelved. The forest is home to half the world population of the Mauritius Kestrel *Falco punctatus*. The kestrel was once the world's rarest bird, with only four individuals in the wild including a single breeding female, in 1974. Due to a captive-breeding and reintroduction programme the population has grown to 800–1,000 birds. The decision to abandon the original highway plans was announced in October 2005 following national elections, when the Prime Minister of Mauritius was elected with promises to change the country within 100 days. The area that was set to be devasted by the road, Ferney Valley, will become a nature reserve.
Source: www.birdlife.org/news/news/2005/05/mauritius.html

Communities manage Madagascar Fish Eagle habitat

Two community associations in the Manambolomaty Lakes complex and surrounding forest area of western Madagascar have won approval from the government to manage, for a ten-year period, wetland sites that provide important natural resources for their local villages and habitat for the Critically Endangered Madagascar Fish Eagle *Haliaeetus vociferoides*. The Peregrine Fund helped the communities to form the associations in the 1990s and subsequently, with support from the Critical Ecosystem Partnership Fund (CEPF), to create natural resource management charters based on community taboos and rules that have traditionally ensured wise management of the sites. Migrant fishermen posed threats by overfishing and cutting down trees on the lakeshores that the eagles use for nesting, but under the new charters the number of Madagascar Fish Eagles around the lake has remained stable at 29 individuals for the last three years, whilst fish catches and wood gathering are reported to be within sustainable limits.
Source: CEPF E-News *August 2005*

Madagascar's protected areas grow by 1,000,000 ha

Madagascar officially created three new protected areas in December 2005, bringing a further 875,000 ha of unique natural habitat under protection. Makira in the north-east of the island, the Ankeniheny-Zahamena corridor in the east, and Anjozorobe in the central province of Antananarivo are home to some of the island's most threatened species of fauna and flora and play vital roles in connecting isolated habitats. Earlier in 2005, a grant from the Critical Ecosystem Partnership Fund (CEPF) to Association Fanamby assisted in the creation of the 72,000-ha Daraina reserve, officially known as the Loky-Manambato Forest Station. Together, these areas have helped the Malagasy government reach its 2005 target of one million hectares of new protected areas, which is a milestone

on the way to fulfilling President Ravalomanana's pledge of bringing 10% of the country under protected area management by 2008.

Source: CEPF E-News *January 2006*

Southern Africa

Kori Bustard poaching investigated

Kori Bustard *Ardeotis kori*, the world's largest bustard, is currently experiencing rapid population declines across much of its range. In Botswana, a stronghold for the species, it is threatened by poaching and habitat loss due to overgrazing. An investigation undertaken by BirdLife Botswana found poaching to be widespread, both for local consumption and for export to South Africa and beyond. A copy of the final report can be obtained by contacting blb@birdlifebotswana.org.bw.

Source: World Birdwatch *27(4), p 8*

Oldest Whimbrel

A Whimbrel *Numenius phaeopus*, ringed in the Bay of Maputo, Mozambique, on 9 November 1976, was found on Bird Island, Algoa Bay, South Africa, on 12 July 2005, having been bitten by a Cape Fur Seal *Arctocephalus pusillus*. The elapsed time between ringing and finding is 28 years and two months, making it the oldest known Whimbrel. It was taken to a rehabilitation centre in Jeffrey's Bay. The July date is interesting, as it is usually thought that birds remaining in their winter quarters are young birds, not yet ready to breed. Perhaps this Whimbrel, at 28 years of age, failed to migrate north because it is too old to breed?

Source: Africa—Birds & Birding *10(5), p 14*

Namibia's Cape Griffon Vultures receive boost

The 12 birds of Namibia's remaining population of Cape Griffon Vultures *Gyps coprotheres* have been joined in the Waterberg Mountain Sanctuary by 14 birds from the Vulture Programme of the De Wildt Cheetah and WildLife Trust in a combined operation with the Rare and Endangered Species Trust. Two individuals were fitted with a satellite transmitter and data on flight patterns, speed, altitude and breeding behaviour are now being recorded.

Source: Africa Geographic *13, p 11*

Internet resources

Ringing & Migration

The British Trust for Ornithology's journal *Ringing & Migration* is now available, free of charge, on the BTO webite. From Vol. 22 (2004) onwards, the full content will be accessible electronically—contents and abstracts are available back to Vol. 20 (2001) and indices to all issues back to Vol. 10 (1989) are on the website too. To see more please visit http://www.bto.org/ringing/rmj/index.htm

American Museum of Natural History publications

The American Museum of Natural History (AMNH) Library has announced the availability of the complete legacy of the museum's scientific publications. Both back issues and ongoing issues have been digitised and all publications are now openly available at: http://digitallibrary.amnh.org/dspace. AMNH's scientific series disseminates the results of work conducted by museum scientists and their colleagues in the fields of zoological systematics, paleontology, geology, evolution and anthropology, and comprises of four titles, among them *American Museum Novitates* (1921–) and *Bulletin of the American Museum of Natural History* (1881–). These publications are made available using DSpace, an open-source digital repository system. For more information, visit http://www.dspace.org

New journal: *Madagascar Conservation & Development*

Madagascar Wildlife Conservation and the Jane Goodall Institute Switzerland plan to publish the new journal, *Madagascar Conservation & Development*. The aims of the journal are to provide a forum for exchange of information about all aspects of conservation and development work in Madagascar, and to alert interested people to particular threats to nature and culture as they arise. The journal will be available online and in hard copy, and will be distributed free to all interested persons and institutions. Read details of the new journal at www.mwc-info.net and www.janegoodall.ch

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Spring Bulletin	15 January
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What is *Pogoniulus makawai*?

N. J. Collar[a] *and L. D. C. Fishpool*[b]

Qu'est-ce *Pogoniulus makawai*? Le Barbion à poitrine blanche *Pogoniulus makawai* a été décrit en 1965 sur la base d'un seul spécimen collecté dans la forêt à *Cryptosepalum* au nord-ouest de la Zambie. A cause de l'absence d'observations ultérieures, la validité de l'espèce a été mise en question. Les arguments suivants on été avancés: (1) il pourrait s'agir d'un individu aberrant du Barbion à croupion jaune *P. bilineatus*, (2) bien que la localité type appartienne à un milieu très particulier, elle n'apparaît pas comme un centre d'endémisme, (3) de nombreux observateurs ont cherché l'espèce en vain. Les auteurs présentent toutefois treize caractéristiques par lesquelles *P. makawai* diffère de *P. bilineatus*, un degré de différence qui, selon eux, ne peut être attribué à une aberration. Du reste, le structure du milieu n'est pas du tout uniforme et les efforts pour redécouvrir *P. makawai* à la localité type et dans ses environs, bien que considérables, ne peuvent être considérés comme exhaustifs. De vastes étendues de forêt à *Cryptosepalum*, un habitat dans lequel il est difficile de travailler, n'ont jamais été prospectées. Les auteurs estiment donc qu'il est prématuré de traiter *P. makawai* comme un synonyme. Des inventaires systématiques et complets sont nécessaires, s'étendant peut-être jusqu'aux régions limitrophes d'Angola ou en République Démocratique du Congo.

What is *Pogoniulus makawai*? The White-chested Tinkerbird *Pogoniulus makawai* was described in 1965 from a single specimen collected in *Cryptosepalum* forest in north-west Zambia. Lack of subsequent records has led to it being increasingly discounted as a valid species, because: (1) it could be an aberrant Yellow-rumped Tinkerbird *P. bilineatus*, (2) although *Cryptosepalum* forest is a very distinctive habitat, the type locality does not appear to be in a centre of endemism, and (3) many people have since searched for it without success. However, we find 13 separate characters by which it diverges from *P. bilineatus*, a degree of difference which we feel cannot be ascribed to aberration. Moreover, the habitat of the area is by no means uniform; and the efforts to rediscover *P. makawai* in and around its type locality, while considerable, cannot be regarded as exhaustive, particularly since large areas of *Cryptosepalum* forest, extremely difficult habitat in which to work, have never been visited. Assigning *P. makawai* to synonymy is, we feel, premature; systematic and comprehensive surveys, perhaps into adjacent Angola or DR Congo, are needed.

From the very moment of its naming, the White-chested Tinkerbird *Pogoniulus makawai* has been haunted by doubt over its taxonomic status. The paper in which Benson & Irwin (1965a) described the species—taken by their remarkable collector Jali Makawa, in whose honour it was named, in an area of *Cryptosepalum* forest north of 'Mayau' in north-west Zambia—was immediately followed by a comment (Goodwin 1965) which postulated the notion that it might, in fact, be an aberrant Yellow-rumped Tinkerbird *P. bilineatus*. Owing to the subsequent inability of anyone to confirm the existence of *P. makawai*—a comment about 'fresh material' in Fjeldså (2003) proving to have been unfounded (J. Fjeldså *in litt.* 2005)—this possibility has been entertained with increasing conviction by two pairs of authorities, Dowsett & Dowsett-Lemaire (1980, 1993) and Short & Horne (1985, 1988, 2001, 2002). As a result, the species was not recognised by Sibley & Monroe (1990), Dowsett & Forbes-Watson (1993), Aspinwall & Beel (1998) or Dickinson (2003). In the face of this substantial scepticism on the part of two highly authoritative world lists, one equally authoritative African list, and the *Handbook of the Birds of the World*, BirdLife International, having treated *makawai* as a threatened species (Collar & Stuart 1985, Collar & Andrew 1988, Collar *et al.* 1994), has since 2000 opted to regard it as Data Deficient (BirdLife International 2000)—meaning that its *taxonomic* status is unclear—although the 'species' was still

used to help define an Important Bird Area in Zambia (Leonard 2001, 2005).

Short & Horne (1988) retained it as a species (with considerable reluctance), as did Sinclair & Ryan (2003)—whose report that the voice of *makawai* is 'subtly different from Yellow-rumped Tinkerbird' is presumably based on the comment in Aspinwall & Beel (1998) that the voices of the two taxa 'may differ'—but the trend in general suggests that because of this taxonomic uncertainty *P. makawai* will steadily disappear as a target of ornithological interest and investigation, and hence of conservation activity. This is in spite of two rather strong declarations in favour of *makawai* as a good species, one by the late C. W. Benson in a personal communication to NJC in Collar & Stuart (1985: 355), in which its 'validity as a species has been most emphatically reasserted', and the other by G. R. Graves, also to NJC, reported in Collar & Rudyanto (2003: 107–108), in which 'following a preliminary (two-hour) inspection of the type, the White-chested Tinkerbird seems likely to prove a good species'. Neither of these judgements was published in a place where much notice would be taken of it—nor perhaps was the plea by Irwin (2003)—and 40 years after the species was named we feel the time has come to examine the evidence afresh, and to weigh more carefully the case for and against *makawai* as a taxonomic entity.

The case for

The case for has hardly been made since the first description. The only subsequent arguments in favour are the two personal judgements just quoted, neither of which comes with any detail to support the conviction. The first thing to be done, therefore, is simply to list out, as clearly as possible, the diagnostic features of *P. makawai* as they emerge in Benson & Irwin's (1965a) comparison with *P. bilineatus* (not all of which are explicitly indicated as distinguishing marks, but which our comparison of text and specimens suggests was their intention): (1) white supraorbital stripe lacking; (2) white line below the ear-coverts only commencing behind the gape, not running below the eye in a continuous band from over the bill; (3) yellow fringes to the secondaries and wing-coverts paler, possibly narrower; (4) chin black, flecked centrally with white (chin whitish in *bilineatus*); (5) throat and upper breast creamy white, fading to pale yellow on the lower chest (throat to belly pale whitish grey in *bilineatus*, belly with a slight greenish tinge); (6) lower breast to belly lacking greenish tinge; (7) central belly black (no such mark in *bilineatus*); (8) entire underparts below breast with pale blackish 'shadow-barring' (absent in *bilineatus*); (9) underside of the bend of wing black, not white; (10) tibial feathering more suffused black; (11) bases of feathers on mantle and underparts pale (dark in *bilineatus*); (12) bill heavier, more arched and less conical, with cutting edges of the upper mandible flared around the gape; (13) black bill whitish basally and from the nostrils to halfway along the cutting edges (all black in *bilineatus*); (14) rictal bristles at the level of greatest development found in any individuals of *bilineatus*; (15) legs and feet markedly paler; (16) toes and claws 'equally pallid' as the legs and feet; and (17) legs slightly longer and more robust.

From our own examination we would make the following comments and qualifications on these numbered characters: the wing fringes (3) are barely perceptibly paler but unquestionably narrower than in *bilineatus*; in contrast to the glossy, inky black of the rest of the plumage, the chin (4) is a matt greyish black; the central belly patch (7) is a rather irregular smudge; the shadow-barring (8) is actually throughout the underparts, even on the creamy-white throat, but so slight as to be virtually invisible on the specimen when held at arm's length; the gape-flange swelling (12) may not be greater than in some *bilineatus*, and as Goodwin (1965) pointed out, some allopatric *bilineatus* have bills that match *makawai* in size; the rictal bristles (14) are likewise barely different from those on *bilineatus*; the continuous coloration of the legs, feet, toes and claws (15, 16) form a single character; the legs are not longer than *bilineatus* and if they are more robust (17) this is too slight and unquantifiable a feature to allow. Thus we would say that the diagnosis of *makawai* rests on characters 1–11, 13 and 15 above, making 13 features in all.

There is one possible further feature in Benson & Irwin (1965a): the white streak below the ear-coverts is ambiguously described as 'joining with the pale under parts' but then 'from which it is separated by a black malar streak'. On balance, we interpret this to mean that the streak *is* continuous with the white neck, but the illustration accompanying the description clearly shows the opposite,

with both *bilineatus* and *makawai* having this lower facial stripe entirely enclosed by black. In partial contrast, the illustrations of the two taxa in Short & Horne (2001) and in Sinclair & Ryan (2003) show this streak meeting the pale underparts in *bilineatus* but being enclosed by black in *makawai*, as if this is a distinct character difference; and the illustrations in Short & Horne (2002), which omit *makawai*, again depict *bilineatus* with a streak continuous with the pale collar (although the position of the painted birds makes this very easy to miss). However, careful inspection of the type of *makawai* reveals that there is no essential difference between it and *bilineatus* in this regard, both taxa having a narrow line of black that in some positions appears to isolate the white cheek-stripe and in others is broken by it. Photographs in Short & Horne (2002: 159) and in Ginn *et al.* (1989: 398) show both conditions in *bilineatus*.

The case against

Of what, then, does the case against consist? As noted, there are three independent sources of doubt: (a) Goodwin (1965), (b) Dowsett & Dowsett-Lemaire (1980, 1993), and (c) Short & Horne (1985, 1988, 2001, 2002). In reality, however, Goodwin (1965) only very tentatively suggested that 'the possibility of its being an aberrant individual of *P. bilineatus* cannot be entirely excluded', and most of his commentary was weighted against this notion. He pointed out that *makawai* shows greater melanism on the head, underwing and central belly than *bilineatus*, and less melanism on the remaining belly area and breast, admitting that 'it would be most unusual, but not unprecedented, for an aberrant individual to have more melanin than normal in some areas and less elsewhere'. He also pointed out that the greater curvature of the culmen and width of the bill of *makawai* are 'not in themselves of great significance', given that some forms of *bilineatus* have bills that approach and even match it in these characters; but he acknowledged that specimens of *bilineatus* (race *mfumbiri*) from near the type locality of *makawai* all have more slender, conical bills, suggesting some ecological separation, and again admitted that 'it would certainly be surprising if an aberrantly coloured individual happened also to have a slightly aberrant bill'. He then observed that *makawai* and *bilineatus* differ more strikingly in colour pattern than do *bilineatus* and Yellow-throated Tinkerbird *P. subsulphureus*, and pointed to the sharp difference in facial pattern of *makawai* and *bilineatus* when viewed front-on (a feature illustrated by Benson & Irwin), remarking that 'this difference could function as an isolating mechanism as there is abundant circumstantial evidence that the coloration of the head and upper breast of birds is often of primary significance in this respect'. Goodwin thus concluded 'that *makawai* is best considered as a new species, at least provisionally', and both Mayr (1971) and Snow (1978) followed this judgement, the former adding a plea for comparative studies of the calls, the latter mistakenly referring to Yellow-throated Tinkerbird *P. subsulphureus* instead of Yellow-fronted Tinkerbird *P. chrysoconus* as the third *Pogoniulus* in the area.

Dowsett & Dowsett-Lemaire (1980), in their first of two brief comments on *makawai*, took much the same line as Goodwin, but, writing 15 years later, pointed out that 'several visits to the type locality have failed to produce any further evidence, and in particular no unusual *Pogoniulus* vocalisations have been heard.' After a further 13 years their patience had worn thinner: 'investigations by a number of observers in north-western Zambia have failed to rediscover it… As anticipated by Dowsett & Dowsett-Lemaire (1980), we now believe it is no longer justified to recognise *makawai* as other than an aberrant *P. bilineatus* (Goodwin 1965)' (Dowsett & Dowsett-Lemaire 1993).

Short & Horne were always unconvinced. 'Despite intensive searches in western Zambia', they wrote, *makawai* 'remains known from but one specimen'; and because that specimen 'comes from no distinctive habitat or area of endemism, and rather closely resembles *P. bilineatus*, we are inclined to regard it as a very aberrant specimen of *bilineatus*' (Short & Horne 1985). Three years later, in *The Birds of Africa* (Short & Horne 1988) they allowed the species an entry but were profoundly sceptical:

> Status highly uncertain. Only 1 bird found, despite repeated searches… No 'odd' tinkerbird calls have been heard or unusual individuals seen… at type locality… *P. makawai* could prove to be an aberrant Yellow-rumped Tinkerbird, if its distinctive features are simple melanism.

By the start of this century, in their book on barbets, their view had hardened further: they could now point to the failure of 'three decades of searching by various ornithologists and bird-watchers', and indeed they did so twice, mentioning again the 'numerous searches' in the 'relatively non-distinctive habitat in which it was found' (Short & Horne 2001). Thus *makawai* is 'almost certainly a very aberrant individual' of *bilineatus*, although in the caption to their illustration of it they described it as a 'morph' (which is a very different biological category). Even so, they gave it a separate account 'because there seems to be no simple genetic explanation for all of its distinct features, e.g. melanism would account for some features, but not the lack of yellow and grey below, nor the heavy bill found in this male' (Short & Horne 2001). On the other hand, only a year later they remarked that *makawai* 'is now generally accepted as representing an odd variant of the Yellow-rumped Tinkerbird' (Short & Horne 2002: 143), with a similar comment under the latter species (Short & Horne 2002: 184).

The case against *makawai* therefore depends on the following points: (1) that it could be an aberrant *bilineatus*; (2) that the type specimen was obtained in an area believed to be undifferentiated by habitat or by endemism; and (3) that searches have failed to find it or even to detect any unknown *Pogoniulus* calls, with emphasis variably placed on the number of searches—'intensive', 'repeated', etc.—and simply the length of time—'three decades'—without renewed contact (Snow [1978] stated, for example: 'All attempts to obtain further specimens have so far proved unavailing'). These three objections need to be examined in turn.

The case against examined

1. *Could it be an aberrant Yellow-rumped Tinkerbird?*—The possibility of *makawai* being an aberrant *bilineatus* seems to us to have been fairly well undermined by Goodwin (1965) even as he raised it. He admitted that aberrant specimens that are both more *and* less melanistic than typical birds are highly unusual; and he further admitted that for any such specimen also to be aberrant in bill morphology would compound the degree of anomaly. Apart from this, we regard the evidence in Benson & Irwin's description—amounting in our judgement to 13 points of divergence—as simply *too much* to be ascribed to aberration. In particular, the redistribution of colour pattern—the black chin, the missing white supraorbital and supraloral bands (but the retained white cheek-stripe), the black belly patch, the part-pale bill and all-pale legs, the whitish dorsal underfeathering—is entirely uncharacteristic of aberrant individuals (although it is of course somewhat problematic to speak of what is typical of atypicality); certainly nothing in the entry 'Plumage, abnormal' in Campbell & Lack (1985) indicates otherwise, and we can think of no comparable case where so distinctive a specimen has been disallowed taxonomic validity.

Moreover, since Goodwin's time of writing very considerable advances have been made in understanding the genetic basis of black plumage in birds (reviewed by Mundy 2005). In the light of these, the probability of a melanin-related mutation accounting for this divergence deserves reconsideration. Across a wide range of taxa intraspecific polymorphisms in melanin-based colours have repeatedly been found to be associated with variation in a single gene (MC1R), but these typically involve a consistent increase in the extent of melanised feathers, rather than the simultaneous darkening and lightening seen in *P. makawai* (as anticipated by Goodwin). Moreover, such mutations are typically not associated with simultaneous side-effects on other traits, such as other components of morphology. Both of these points would tend to imply that the morphological differences between *makawai* and *bilineatus* are highly unlikely to have arisen as a consequence of a one-off mutation generating a single aberrant individual.

2. *Is the type locality undifferentiated by habitat or endemism?*—That the type of *makawai* comes from an area of low endemism and from a widespread habitat is not in serious dispute. Nevertheless, Benson & Irwin (1965a) pointed out that *Cryptosepalum* forest in this area could be seen as 'an evolutionary centre' given the presence there of 'such distinctive forms' as the red-necked race of Crested Guineafowl *Guttera edouardi kathleenae* (although this is synonymised in Crowe *et al.* 1986), plus Margaret's Batis *Batis margaritae kathleenae* and, 'in this part of its range', Gorgeous Bush-shrike *Telephorus viridis*. Benson & Irwin (1965b) and Benson *et al.* (1971) expanded on

this, indicating that the first and third of these taxa are known in Zambia only from this area of *Cryptosepalum*, which Irwin (2003) stressed 'can hardly be described as "non-distinctive"'. T. B. Oatley (*in litt.* 2005) agrees: 'One needs to look at the region, not just the *Cryptosepalum* forest, and *Macronyx grimwoodi* [Grimwood's Longclaw] (and, if I remember rightly, some butterflies) can then be added to the list of local endemics.' Benson & Irwin (1965b) offered the following scenario:

> *Pogoniulus makawai* is according to present knowledge endemic to *Cryptosepalum*... The ancestral population may have been widespread and plentiful in a former more extensive area of *Cryptosepalum*. Thereafter, as recently as 12,000 years ago, according to Moreau, a drier period ensued, during which this population may have become isolated, and speciated into *makawai*. Subsequently, under a moister, modern regime, *bilineatus* has perhaps reinvaded the *Cryptosepalum*. It may be in active and successful competition with *makawai*, which may before long become extinct.

Whether or not it is plausible that *makawai* speciated as recently as 12,000 years ago, this explanation for its rarity makes considerable sense. It is not necessarily the case, however, that there is direct competition between *makawai* on the one side and *bilineatus* and, indeed, the syntopic Yellow-fronted Tinkerbird *P. chrysoconus* on the other; rather, one might expect *makawai* with its more voluminous bill to occupy a feeding niche that allows its co-existence with these closely related species. Benson *et al.* (1971) made this point, and F. Dowsett-Lemaire (*in litt.* 2005) has pointed out that some species of *Pogoniulus*—including indeed *chrysoconus*—are specialists on mistletoe berries (Loranthaceae and Viscaceae) (see Dowsett-Lemaire 1988), so some kind of specialism in *makawai* would seem likely to explain the co-occurrence of three congeners.

3. *Has it been exhaustively searched for?*—Finally, there is the number of times that the type locality and nearby areas of *Cryptosepalum* have been visited with no evidence of *makawai* being found. From some of the language used by those considering the issue (reference to 'intensive' surveys and 'three decades' of searching), it is easy to assume that very considerable endeavours have gone into the quest for *makawai*. But what is the truth of this? Benson & Irwin (1965b) were the first to report on a new search. The specimen was collected on 6 September 1964 during a four-day prospection of the area (3–7 September), and the area was revisited for five days, 8–12 November 1964, when 'every effort was made to find the species again, but completely without success'. The following year, in May 1965, Oatley (1969) spent three weeks in north-west Zambia, explicitly in order to document the avifauna better and to discover more about *makawai*; he camped near 'Mayau' on 2–8 May, at a time when tinkerbirds were breeding, but heard no unusual calls, observing that 'possibly the single known specimen was a vagrant from some other locality, perhaps farther west in eastern Angola' (and speculating that the heavier bill might be less important in feeding ecology than in hewing nesting cavities in harder timber than that encountered by *bilineatus*). Fifteen years after Oatley's endeavour, Dowsett & Dowsett-Lemaire (1980) reported that 'several visits' to the type locality had drawn blank. The most important of these was by R. J. Dowsett with J. Makawa himself in 1973, when they spent 9–20 August at Mayau and collected ten *bilineatus* (Dowsett 1973, R. J. Dowsett *in litt.* 2005). The only other publication on *Cryptosepalum* birds in north-west Zambia, by Bowen (1980), was a study which did not involve 'Mayau', although one of the two sites surveyed was deemed very like 'Mayau', since it produced a bird list very similar to that in Benson & Irwin (1965b). Bowen, like Oatley, was constantly alert for novel tinkerbird calls but heard none, and speculated 'that *makawai* does not extend as far north as the areas I covered'. Altogether, therefore, the evidence appears to be that relatively little work has been done in the area of the kind that would be appropriate to a serious endeavour to rediscover the species.

Thus A. J. Scott, director of the Wildlife Conservation Society of Zambia, wrote to J. H. Fanshawe at BirdLife International in 1989 to report that 'no-one has made any attempt to find [*P. makawai*] since Bob Dowsett... in the early 1970s'. From 1989 things evidently changed somewhat. R. J. Dowsett (*in litt.* 2005) himself has very helpfully enumerated the observers who have been to the type locality, and he suggests that,

in all, more than two man-months have been spent there by competent field workers:

> Dylan Aspinwall (several times); Carl Beel (incl. 1–3 Sep 1995); Clide Carter (several visits), with Nigel Hunter (5–6 Oct. 1989); Pete Leonard (incl. Aug. 1996); Jorg Mellenthin (Feb. & Aug. 2000, also 2002); Bob Payne; Bob Stjernstedt (incl. 14 Apr. 1974); Paul van Daele (incl. Sep. 1998). Details of other visits are unknown, but everyone who has lived in Zambia for any length of time has visited the area (and some visiting birders), hoping to become famous. I have also passed by Mayau briefly on other occasions. In addition, Françoise [Dowsett-Lemaire] and I spent 12 days camped a bit further south in the neighbouring West Lunga National Park in Nov. 1978 (Dowsett & Dowsett-Lemaire 1978), with no sign of any unusual tinkerbird.

C. Beel (*in litt.* 2002) informed us that 'Clide Carter, Dylan Aspinwall and Bob Stjernstedt tried' to find it at some stage, although the sadly late Aspinwall (*in litt.* 1981 and 1994) did not mention such attempts and indeed in 1994 reported that he had no immediate plans to investigate the species; by that stage he was inclining to the view that *makawai* was most probably an aberrant *bilineatus*, which is, as already noted, how it was treated in Aspinwall & Beel (1998). Meanwhile Beel himself believed that only he, P. M. Leonard and P. van Daele had visited the area in recent years for any time, although Ryan & Cassidy (2003) paid a brief visit, and bird tours stop there to find Gorgeous Bush-shrike. Beel (*in litt.*) continued:

> Nearly all of us have spent time along the main Mwinilunga–Kabompo road. It is not easy to enter the forest away from this road. There is (was?) a narrow track to a game camp on the edge of West Lunga National Park which starts at Mayau. I tried to follow it, lost my car antenna and nearly my mirrors, then turned back. This track crosses a vast block of *Cryptosepalum* where no-one has tried to look. *Cryptosepalum* itself is very hard to get around in; it is very dense and tangled. This makes it very difficult to get a good look at a tinkerbird even a short distance into the forest. I think none of us spent more than a day, maybe two in the area. Very few tinkerbirds can be seen. Those seen have always been Golden-rumped and Yellow-fronted. No-one has been trying to call up each and every tinkerbird or concentrate fully on them. It is definitely true that no hard effort was made to prove or disprove the existence of *P. makawai*. Nearly all efforts were near the type locality. It might just be possible that the bird is not in prime habitat (anymore?) at that spot, especially as more people have moved into the area and cut lots of trees and burnt undergrowth. There are large tracts of *Cryptosepalum* remaining, but difficult of access and unvisited.

Slightly more recently, P. M. Leonard (*in litt.* 2004) has commented as follows:

> Very few serious expeditions have taken place. Perhaps Terry Oatley's in the 60s was the most serious, but I know of very few who have stayed more than a couple of nights before being driven away by sweat-bees and truly impenetrable jungle. I don't think the searching has been thorough at all. Everybody tags it onto a Mwinilunga trip as a token gesture, but it needs a month of hardcore canopy scanning.

This testimony is important: it suggests that a relatively rare bird of the canopy could easily go undetected in such dense and unwelcoming habitat (Beel stressed the need to provide plenty of water on a visit, and to prepare for the sweat-bees). If in fact there is some subtle habitat selection by *makawai* within the *Cryptosepalum*—for example, perhaps in taller growth along watercourses—then the lack of records since 1964 might be all the more understandable.

T. B. Oatley (*in litt.* 2005) is surprised at Beel and Leonard's comments about the impenetrability of the habitat, and offers the following reflexions:

> In 1965, the mavunda was not 'very dense and tangled' or 'hard to get around in' and it certainly was not 'truly impenetrable jungle'. In fact, once one got through the dense edge-effect road fringe, one could walk around over a fairly open forest floor with scattered thickets of undergrowth [R. J. Dowsett *in litt.* 2005 reports similar conditions in 1973]. It sounds to me as though there has been heavy exploitation of the taller timber (resulting in dense secondary growth) in the area, which lies distant from district administrative centres and is probably seldom

> policed by forestry officers. I note that Beel explicitly refers to lots of tree cutting... Thinking over the possibilities, we concentrated most of our searching in the *Cryptosepalum* forest patches, assuming that *makawai* was a forest canopy bird. But it need not have been. The area where it was collected was a mosaic of miombo woodland and mavunda forest, and bird parties from the woodland regularly entered the canopies of the forest patches that were in their path. Another point that arises is that September, when Jali collected the bird, is the early spring month when birds (especially floaters) move around a lot looking for mates or vacancies in the breeding population. Sept/Oct is also the time when many altitudinal and other Afrotropical migrants are on the move, the time when one can find odd birds briefly sojourning in atypical habitats!

To this M. P. S. Irwin (*in litt.* 2005) adds some further thoughts:

> With long experience of collecting in the field, it is extremely difficult to say that something is not there or has been missed. Move camp a mile or two into a slightly different habitat and there will be a complete change in the species one is likely to collect. All collecting [at Mayau] was done back from the river of that name where the forest was densest. But what about somewhere miles away? And look at the *Cryptosepalum* in Angola, which seems particularly dark and dense and quite unlike that at Mayau.

Conclusion

All of these factors lead us to the conclusion that there is no firm basis yet to discount *Pogoniulus makawai* as a good species. From this it must follow that either (a) it is very uncommon throughout *Cryptosepalum* forest in north-west Zambia, or (b) it is restricted to a relatively uncommon habitat within or adjacent to *Cryptosepalum* (if the type was taken *on* the Mayau River, then perhaps it was in or near riverine forest, not *Cryptosepalum*), or (c), as Oatley (1969) speculated, it is a straggler in this area from somewhat different habitats further west in near-adjacent Angola, a very little explored area, to which we would add the southern Democratic Republic of Congo, close to the border of which the type locality of *makawai* also lies. With respect to this last point, it is worth noting that the type locality is also right on the edge of the range of *bilineatus* in Central Africa (see the maps in Snow 1978, Short & Horne 1988), so it would seem plausible that *makawai* may prove to be a replacement of *bilineatus* in slightly different habitats in this area.

Certainly a concerted, systematic endeavour over several months is likely to be required either to relocate *makawai* within the general area of the type locality or to discount it properly from the local avifauna—but even then we could not countenance abandoning the species to synonymy without much more work further west or north. (A hybrid origin of *makawai* seems, incidentally, never to have been mooted, but if a hybrid shows a degree of character intermediacy and *bilineatus* is one parent—both of which are reasonable assumptions—no plausible candidate for the other parent presents itself; on this point the explanation at once founders. Another consideration is that the type specimen of *makawai* might yet possess sufficient DNA to test against *bilineatus*, which possibly would resolve the debate at a stroke—but we can do no more than encourage the exploration of this notion.)

Meanwhile, from our study of the type specimen in the Natural History Museum, Tring, UK, we can confirm 13 points of distinction from *P. bilineatus mfumbiri* indicated by Benson & Irwin (1965a) as enumerated above (some of them evident on the accompanying plates). The specimen (BMNH 1964.33.1) was an adult breeding male, testes 9.0 × 6.5 and 7 × 6 mm, wing 56 mm, tail 32 mm, tarsus 15 mm, culmen from base of skull 13 mm (Benson & Irwin 1965a); its skull was fully ossified (BMNH label data). It was collected 'high up' in the canopy of *Cryptosepalum* forest on Kalahari sand on 6 September 1964, four miles north of Mayau, Kabompo District, Zambia, at roughly 12°42'S 24°16'E (Benson & Irwin 1965a). The geographic component of this information was adjusted by Dowsett (1980):

> ...because of the importance of discovering further specimens of this species it is desirable to publish as accurate a type-locality as possible. There is no locality named Mayau, but there is a river of that name (or Mayowo) and a plain. The specimen was collected about 6 km north of where the track from

Figures 1–3. The type and only specimen of *Pogoniulus makawai* (BMNH 1964.33.1, above), an adult male, taken near the Mayau River in north-west Zambia, September 1964, with an adult male *P. bilineatus* (BMNH 1964.33.2, below) taken at the same site three days earlier. Characters of *makawai* visible here are: no white supraorbital stripe; white line below ear-coverts commencing only behind gape; yellow edges to secondaries and wing-coverts narrower; chin black, flecked centrally white; throat and upper chest creamy-white, fading to pale yellow on lower chest; lower chest to belly without greenish tinge; central belly black; whole underparts below chest with blackish 'shadow-barring'; tibial feathering more suffused black; black bill whitish basally and from nostrils to halfway along cutting edges; legs and feet markedly pale. Other characters include underside of bend of wing black, not white; bases of feathers on mantle and underparts light, not dark.

L'unique spécimen (le spécimen type) de *Pogoniulus makawai* (BMNH 1964.33.1, en haut), un mâle adulte, collecté près de la Mayau, Zambie du nord-ouest, septembre 1964, avec un mâle adulte *P. bilineatus* (BMNH 1964.33.2, en bas) collecté à la même localité trois jours auparavant. Les caractéristiques suivantes de *makawai* peuvent être notées: absence de trait supraorbital blanc; trait blanc sous la joue commençant seulement en arrière de la commissure; rémiges secondaires et couvertures alaires à lisérés jaunes plus étroits; menton noir, tacheté de blanc au centre; gorge et haut de la poitrine blanc-crème, devenant jaune pâle sur le bas de la poitrine; absence de teinte verdâtre sur le bas de la poitrine et le ventre; milieu du ventre noir; ventre barré de sombre; plumes du tibia teintées davantage de noir; bec noir, avec la base des mandibules blanchâtre depuis les commissures jusqu'à la moitié du bec; pattes nettement pâles. D'autres caractères comprennent: dessous de la courbe de l'aile noir, non pas blanc; base des plumes du manteau et des parties inférieures claire, pas sombre.

1

2

3

Credit for Figure 1: N. J. Collar (© Natural History Museum)

Credit for Figures 2–3: C. N. Spottiswoode (© Natural History Museum)

Mwinilunga to Kabompo crosses the Mayau; this is at an altitude of 1,150 m at about 12°42'S 24°15'E.

As precisely as possible, it is at this site that a systematic long-term search for the species should commence, whether the habitat has been modified or not, spreading out methodically into the surrounding areas, with a particular interest in sampling any slight modifications of *Cryptosepalum* forest caused by water or other features, taking special note of mistletoe taxa and abundance, and with an eye on the fact that at this locality *bilinea-*

tus is, apparently, at the southern edge of its range in the country.

There was a time when the failure of ornithologists to locate the Red-tailed Newtonia *Newtonia fanovanae* was attributed to the type and only specimen being an aberrant Red-tailed Vanga *Calicalicus madagascariensis* (see Collar & Stuart 1985). This view was, incidentally, strongly opposed by none other than C. W. Benson (Benson *et al.* 1977), but it took years before the increased ornithological interest in Madagascar from the early 1980s yielded a conclusive result—indeed, two virtually simultaneous results (Goodman & Schulenberg 1991; also Evans 1991). The rediscoveries of the Yellow-throated Serin *Serinus flavigula* and São Tomé Grosbeak *Neospiza concolor*, each after over 100 years of absence, were likewise fundamentally a matter of scrutinising the evidence (see Collar & Stuart 1985) and patiently covering the ground in the most likely places (Ash & Gullick 1990, Sergeant *et al.* 1992). These three rediscoveries all occurred after considerable prior ornithological activity in the vicinity of the respective type localities, and they speak to us with the same single message: it is still too soon to place *Pogoniulus makawai* in synonymy with *P. bilineatus*, and if we look long and hard enough we may yet be pleasantly surprised.

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White-winged Flufftail *Sarothrura ayresi* in Ethiopia: notes on habitat, densities, morphometrics, nests and eggs, and associated waterbirds

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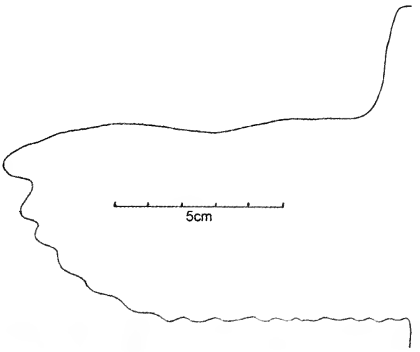
Le Râle à miroir *Sarothrura ayresi* en Ethiopie: notes sur l'habitat, la densité, les mensurations, le nid et les œufs, et les oiseaux d'eau associés. Du 24 juillet au 2 août 2003, les auteurs ont mené des études à Weserbi (près de Sululta) et Berga, les deux seuls sites connus du Râle à miroir *Sarothrura ayresi*, espèce globalement menacée, en Ethiopie. Aucune vocalisation des râles n'a été entendue, malgré le fait que les oiseaux étaient en train de nicher et que les auteurs y ont prêté particulièrement attention avant l'aube et après le coucher du soleil. Un mâle adulte a été capturé à Weserbi et ses mensurations ainsi que des détails sur sa mue sont présentés. Des Râles à miroir ont été levés environ 20 fois pendant chacun des deux jours passés à Weserbi. A Berga, dix râles furent levés en 433 minutes en ratissant avec une corde l'ensemble des zones apparemment favorables, et beaucoup d'autres en dehors de cet exercice. Des détails sur les oiseaux d'eau rencontrés à Berga sont présentés et comparés à des données similaires de six des neuf zones humides principales en Afrique du Sud où l'espèce a été notée depuis les années 1980. L'oiseau d'eau le plus commun à Berga et dans les zones humides sud-africaines est la Bécassine africaine *Gallinago nigripennis*. Des données sont présentées sur 12 nids de bécassines trouvés à Weserbi et Berga. La taille des pontes de ces bécassines (quatre œufs) est exceptionellement élevée pour la Bécassine africaine. Des détails sont également présentés sur l'habitat du Râle à miroir à Berga, y compris l'habitat utilisé pour nicher. Des sept nids de Râle à miroir trouvés sur ce site, un contenait quatre œufs, tandis que les six autres étaient vides. Des données quantifiées sur les nids et les œufs sont présentées. Deux jours consacrés à la recherche de nouveaux sites de nidification potentiels du Râle à miroir au nord d'Addis-Abeba sont restés sans résultat. L'identification erronnée d'estomacs supposés avoir appartenu à des râles (Allan 2004) est corrigée.

Summary. We visited the only two known sites, Weserbi (near Sululta) and Berga, of the globally threatened White-winged Flufftail *Sarothrura ayresi* in the highlands of Ethiopia on 24 July–2 August 2003. No vocalisations of the flufftails were heard despite the birds breeding and our listening for them before and after sunrise and sunset. An adult male was captured at Weserbi and details of its measurements and moult are presented. White-winged Flufftails were flushed on *c.*20 occasions on each of two day-trips to Weserbi. At Berga, ten flufftails were flushed during 433 minutes of rope-dragging covering all apparently suitable habitat and many more were flushed while at this wetland engaged in other activities. Details of other large waterbirds encountered at Berga are presented and compared with similar data from six of the nine main wetlands in South Africa where the species has been recorded since the 1980s. African Snipe *Gallinago nigripennis* was the most common large waterbird at both Berga and the South African wetlands. Details are presented of 12 snipe nests found at Weserbi and Berga. Clutch size (typically four eggs) was unusually large for African Snipe. Details are also presented of White-winged Flufftail habitat, including breeding habitat, at Berga. Of the seven White-winged Flufftail nests found at this site, one contained four eggs, whilst the others were empty. Quantified details of the nests and eggs are presented. Two days were spent searching unsuccessfully for potential new White-winged Flufftail breeding sites north of Addis Ababa. An error presented in Allan (2004) relating to the misidentification of alleged flufftail stomachs is corrected.

1



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White-winged Flufftail's *Sarothrura ayresi* global conservation status is 'Endangered' and its total population size is estimated at *c.*700 individuals (BirdLife International 2000, 2005). The presence of this Afrotropical endemic has been confirmed in only three countries: Ethiopia, South Africa and Zimbabwe; records from Rwanda and Zambia being unconfirmed (BirdLife International 2000). In Ethiopia it currently is known from two sites, Weserbi, in the Sululta area, and Berga, and it has been proved to breed at both (Atkinson *et al.* 1996, Taylor 1997, 1999, BirdLife International 2000). Both sites are Important Bird Areas (Fishpool & Evans 2001). In South Africa, where there is no confirmed evidence of breeding, the species has been recorded from nine main sites (all of which are within Important Bird Areas) since the 1980s and the total estimated population is 235 birds (BirdLife International 2000, Taylor 2000). In Zimbabwe there are two records from the 1970s and evidence for possible breeding in the 1950s (Hopkinson & Masterson 1984, Taylor 1994, BirdLife International 2000), although the first confirmed

Figure 1. Head of adult male White-winged Flufftail *Sarothrura ayresi*, Weserbi, Ethiopia, 24 July 2004 (Alistair M. McInnes)

Râle à miroir *Sarothrura ayresi*, tête de mâle adulte, Weserbi, Ethiopie, 24 juillet 2004 (Alistair M. McInnes)

Figure 2. Upperwing pattern of adult male White-winged Flufftail *Sarothrura ayresi*, Weserbi, Ethiopia, 24 July 2004 (Alistair M. McInnes)

Râle à miroir *Sarothrura ayresi*, mâle adulte, pattern du dessus de l'aile. Weserbi, Ethiopie, 24 juillet 2004 (Alistair M. McInnes)

Figure 3. Open-wing outline (right wing; taken with bird lying on its back) of adult male White-winged Flufftail *Sarothrura ayresi*, Weserbi, Ethiopia, 24 July 2004

Contour de l'aile ouverte d'un Râle à miroir *Sarothrura ayresi*, mâle adulte (aile droite; prise avec l'oiseau couché sur le dos), Weserbi, Ethiopie, 24 juillet 2004

Figure 4. Active White-winged Flufftail *Sarothrura ayresi* nest, Berga, Ethiopia, 31 July 2004 (David G. Allan)

Nid occupé du Râle à miroir *Sarothrura ayresi*, Berga, Ethiopie, 31 juillet 2004 (David G. Allan)

Table 1. Results of rope-dragging at Berga 26–27 July 2003.
Tableau 1. Résultats du ratissage avec corde du milieu à Berga, 26–27 juillet 2003.

Section/Date	southeast — 26 July						northeast — 27 July						northwest — 27 July					
Transect no.	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4		
Time		12h30–14h33		15h05–15h25	15h25–15h45	16h11–16h35	09h30–09h55	09h56–10h26	10h56–10h42	10h42–10h55	10h55–11h13	11h13–11h25	12h00–12h28	12h28–12h55	12h59–13h30	13h30–13h46		
Mins		123		20	20	24	25	30	46	13	18	12	28	27	31	16	**433**	**Birds/60 mins**
Long-tailed Cormorant *Phalacrocorax africanus*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**0.14**
Black-headed Heron *Ardea melanocephela*	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**	**0.14**
Blue-winged Goose *Cyanochen cyanopterus*	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	**0.28**
Yellow-billed Duck *Anas undulata*	0	0	1	0	0	2	1	0	1	0	0	2	0	1	0	0	**8**	**1.12**
African Water Rail *Rallus caerulescens*	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	**2**	**0.28**
Rouget's Rail *Rougetius rougetti*	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**0.14**
White-winged Flufftail *Sarothrura ayresi*	1	0	3	0	0	0	1	2	0	0	0	0	1	2	0	0	**10**	**1.40**
African Snipe *Gallinago nigripennis*	11	19	6	11	16	10	4	7	5	3	3	4	4	6	5	9	**123**	**17.22**

description of eggs from Ethiopia (Taylor 1999, Taylor *et al.* 2004) further calls into question the early putative Zimbabwean breeding evidence (Taylor *et al.* 2004).

It is uncertain if the species migrates between Ethiopia and South Africa or if each country supports its own isolated population (BirdLife International 2000). Enigmatically, this flufftail's vocalisations have been reported only from South Africa, where the purported main call has been likened to, and apparently is easily confused with, the unison call of the Grey Crowned Crane *Balearica regulorum* (Taylor 1998, BirdLife International 2000). The habitat of the species comprises seasonally flooded upland marshes and the major threat faced by this flufftail is the loss and degradation of these wetlands (BirdLife International 2000).

Here we present results of field work on White-winged Flufftails at Weserbi (09°12'N 38°43'E) and Berga (09°16'N 38°23'E) marshes in Ethiopia, conducted from 24 July to 2 August 2003. We visited Weserbi marsh twice (on 24 July and 2 August) and Berga marsh on five days (25–28 and 31 July). A comparison of the waterbird populations present at Berga and at South African wetlands where White-winged Flufftails have been reported is presented. In addition, we undertook a two-day vehicle trip north of Addis Ababa to search for additional White-winged Flufftail breeding sites. A popular account covering aspects of this work was presented by Allan (2004). Information presented in Allan (2004) is not repeated here, but additional details of the results are given, especially as related to quantified data. An error in the earlier account is corrected.

Aims of the study

Our major aims during this Ethiopian study were the following:

1) To collect the first descriptions and tape-recordings of the calls of White-winged Flufftail on their confirmed breeding grounds.
2) To capture the flufftails wherever possible, to gather morphometric and moult information.
3) To attempt quantified censuses of the flufftails at their breeding wetlands by plotting calling males and using playback and rope-dragging, and to record details of other large waterbird species encountered during these censuses.
4) To note habitat details at the areas in the wetlands where the flufftails occur.
5) To search for flufftail nests and other evidence of breeding.
6) To search for new breeding sites of flufftails in the Ethiopian highlands.
7) To collect feather samples of resident Ethiopian highland birds, especially large waterbirds, present at the flufftail breeding wetlands, and from the flufftails themselves, for potential trace-element analysis relevant to investigating the potential migration of the flufftails between Ethiopia and South Africa.

Table 2. Comparison of results of rope-dragging at South African wetlands (Wakkerstroom, Vanger, Bedford-Chatsworth, Murphy's Rust, Franklin and Hebron) in 2001–2004 (covering a total of 27 hours and 8 minutes) and at Berga, Ethiopia, July 2003 (covering a total of 7 hours and 13 minutes).

Tableau 2. Comparaison des résultats du ratissage avec corde des zones humides sud-africaines (Wakkerstroom, Vanger, Bedford-Chatsworth, Murphy's Rust, Franklin et Hebron) en 2001–2004 (27 heures et 8 minutes au total) et à Berga, Ethiopie, juillet 2003 (7 heures et 13 minutes au total).

	Wakkerstroom		Vanger		Bedford/ Chatsworth		Murphy's Rust		Franklin		Hebron		**South Africa Totals**		Berga	
	Dec. 2002		Sep. 2001		Sep. & Dec. 2001 Dec. 2002		Dec. 2001		Jan. 2002		Feb. 2004				July 2003	
	n=146 mins	birds/60 mins	*n*=44 mins	birds/60 mins	*n*=928 mins	birds/60 mins	*n*=148 mins	birds/60 mins	*n*=252 mins	birds/60 mins	*n*=110 mins	birds/60 mins	***n*=1628 mins**	**birds/60 mins**	*n*=433 mins	birds/60 mins
Long-tailed Cormorant *Phalacrocorax carbo*	0		0		0		0		1	0.2	0		**1**	**0.04**	1	0.14
Black-headed Heron *Ardea melanocephala*	0		0		3	0.2	0		4	1	5	2.7	**12**	**0.44**	1	0.14
Purple Heron *A. purpurea*	0		0		1	0.1	0		1	0.2	0		**2**	**0.07**		
Little Egret *Egretta garzetta*	0		0		0		0		2	0.5	0		**2**	**0.07**		
Yellow-billed Egret *E. intermedia*	0		0		0		0		1	0.2	0		**1**	**0.04**		
Hadeda Ibis *Bostrychia hagedash*	0		0		6	0.4	0		0		0		**6**	**0.22**		
Blue-winged Goose *Cyanochen cyanopterus*	0		0		0		0		0		0				2	0.28
Yellow-billed Duck *Anas undulata*	4	1.6	0		78	5.5	11	4.5	40	9.6	4	2.2	**137**	**5.05**	8	1.12
African Black Duck *A. sparsa*	0		0		2	0.1	0		0		0		**2**	**0.07**		
Hottentot Teal *A. hottentota*	0		0		0		0		2	0.5	0		**2**	**0.07**		
Spur-winged Goose *Plectropterus gambensis*	0		0		5	0.4	0		5	1.2	20	10.9	**30**	**1.11**		
African Marsh Harrier *Circus ranivorus*	2	0.8	0		8	0.6	0		2	0.5	2	1.1	**14**	**0.52**		
Wattled Crane *Bugeranus carunculatus*	0		0		4	0.3	0		0		3	1.6	**7**	**0.26**		
Grey Crowned Crane *Balearica regulorum*	1	0.4	0		10	0.7	1	0.4	12	2.9	2	1.1	**26**	**0.96**		
African Water Rail *Rallus caerulescens*	4	1.6	0		2	0.1	2	0.8	5	1.2	0		**13**	**0.48**	2	0.28
Rouget's Rail *Rougetius rougetti*	0		0		0		0		0		0				1	0.14
Corncrake *Crex crex*	0		0		1	0.1	0		0		1	0.6	**2**	**0.07**		
Black Crake *Amaurornis flavirostris*	0		0		0		0		1	0.2	0		**1**	**0.04**		
Baillon's Crake *Porzana pusilla*	0		0		3	0.2	0		4	1	0		**7**	**0.26**		
Red-chested Flufftail *Sarothrura rufa*	0		0		1	0.1	1	0.4	0		0		**2**	**0.07**		
White-winged Flufftail *S. ayresi*	0		0		0		0		0		0				10	1.4
Purple Swamphen *Porphyrio porphrio*	0		0		0		0		1	0.2	0		**1**	**0.04**		
Common Moorhen *Gallinula chloropus*	0		0		0		1	0.4	7	1.7	0		**8**	**0.3**		
Three-banded Plover *Charadrius tricollaris*	0		0		0		0		0		1	0.6	**1**	**0.04**		
Blacksmith Lapwing *Vanellus armatus*	5	2.1	0		2	0.1	0		0		3	1.6	**10**	**0.37**		
African Wattled Lapwing *V. senegallus*	4	1.6	0		3	0.2	0		0		0		**7**	**0.26**		
Wood Sandpiper *Tringa glareola*	0		0		0		0		2	0.5	0		**2**	**0.07**		
Common Greenshank *T. nebularia*	0		0		0		0		1	0.2	0		**1**	**0.04**		
African Snipe *Gallinago nigripennis*	24	9.8	8	10.9	178	12.5	20	8.2	41	9.8	13	7.1	**284**	**10.47**	123	17.22
African Grass Owl *Tyto capensis*	4	1.6	0		4	0.3	0		1	0.2	1	0.6	**10**	**0.37**		
Marsh Owl *Asio capensis*	1	0.4	0		31	2.2	0		0		0		**32**	**1.18**		
Malachite Kingfisher *Alcedo cristata*	0		0		1	0.1	0		1	0.2	0		**2**	**0.07**		
Cape Wagtail *Motacilla capensis*	0		0		6	0.4	1	0.4	0		0		**7**	**0.26**		
TOTALS	**49**		**8**		**349**		**37**		**134**		**61**		**632**	**23.30**	148	20.50

These samples are still being analysed and this aspect of the study will not be reported on further here.

Results and discussion

White-winged Flufftail vocalisations

No flufftail vocalisations were heard at any stage. Weserbi was visited only during daylight hours, but at Berga we listened for the birds before and after sunset, and before and after sunrise (in addition to the many daylight hours we were present). The periods devoted to this at Berga were as follows: 25 July: 16h30 until *c.*19h30 (late afternoon until well after dark); 26 July: 05h30–07h00 (dark until full light); 27 July: 05h45–07h00 and 18h30–19h45; and 28 July: 05h30–09h00. No calling was noted, despite the birds being clearly in the early stages of breeding at Berga (see below) and calling from other rallids present was common, e.g. African Water Rail *Rallus caerulescens* and Rouget's Rail *Rougetius rougetti*. A single Red-chested Flufftail *Sarothrura rufa* was tape-recorded at Berga on our last 'listening stint'. This species has been noted previously at Berga (Taylor 1997).

We can only speculate as to our failure to hear any White-winged Flufftails. Possibly they call at their breeding sites only prior to initiating nesting and were already silent by the time we arrived. Perhaps they only call very late at night, when we were absent. Possibly their calls are inconspicuous and we overlooked them. Conceivably we were unlucky and they did not call (at least within earshot) during our five prime listening opportunities. Or maybe White-winged Flufftails are totally silent throughout their sojourn on their breeding grounds. This, however, would be remarkable considering the vocal nature of the Rallidae, at least during the breeding season (Taylor & van Perlo 1998). Taylor *et al.* (2004) also report the species to be ostensibly silent on the breeding grounds. Taylor & van Perlo (1998) point out that the only other members of the Rallidae that have white secondaries are the three species of *Coturnicops*. They describe the main call of one (Speckled Rail *C. notatus* of southern South America) as 'unobtrusive and easily masked by other marsh sounds', another (Yellow Rail *C. noveboracensis* of North America) as 'a series of metallic clicks' and the third (Swinhoe's Rail *C. exquisitus* of the Far East) as 'not recorded'. *Sarothrura* and *Coturnicops* may be closely related (Taylor & van Perlo 1998).

White-winged Flufftail morphometrics and moult

An adult male White-winged Flufftail was caught by hand, and subsequently released unharmed, at Weserbi on 24 July (Figs. 1–2). The following measurements were taken: wing-length (flattened chord) 72 mm, tarsus-length (notch on rear of tibio-tarsal joint to point of divergence of upper surface of inner toe) 23.8 mm, culmen-length (to feathering) 10.6 mm. In addition, its open-wing outline was traced onto paper (Fig. 3). There was no sign of moult in the remiges and its entire plumage appeared very fresh.

Taylor & van Perlo (1998) present the following relevant measurements for White-winged Flufftail males: mean wing-length (flattened chord) 76.3 mm (range=73.0–80.0; n=14), mean tarsus-length (inter-tarsal joint to distal end of last undivided scale before toes diverge) 18.5 mm (range=17.0–19.5; n=14) and mean culmen-length (to base) 12.4 mm (range=12.0–13.5; n=13). Our wing-length, using the same method as Taylor & van Perlo (1998), was 1 mm shorter than their presented range. Our tarsus- and culmen-lengths were measured differently to Taylor & van Perlo (1998) and are not directly comparable. Taylor & van Perlo (1998) also state that Ethiopian birds examined in late July were in very fresh plumage.

Large waterbird censuses

The absence of calling ruled out any census of White-winged Flufftail based on plotting calling males or on playback efforts. White-winged Flufftails were flushed on *c.*20 occasions on each of the two day-trips to Weserbi. On both days, many of these instances probably represented the same individuals flushed more than once. No rope-dragging was performed at Weserbi. Atkinson *et al.* (1996) estimated that two pairs were present at Weserbi in 1995. Taylor (1997) estimated the site to support 10–15 pairs in 1996 and 1997, and we would subjectively agree with this estimate.

A major activity at Berga comprised rope-dragging, a widely accepted method of assessing cryptic-waterbird abundances (see e.g. Green 1985). This method was used at Berga previously

by Taylor (1999), and we employed it on 26–27 July. We covered all of the apparently suitable habitat, subjectively estimated at *c.*50–100 ha. Taylor (1997) estimated the suitable habitat at *c.*200 ha in 1997. The number of large waterbirds counted during these efforts is presented in Table 1. Ten White-winged Flufftails were flushed during 433 minutes of rope-dragging (and many others were flushed while we were at the wetland engaged in other activities). The flufftail was the second-most common of the eight large waterbird species encountered while rope-dragging, after the ubiquitous African Snipe *Gallinago nigripennis*. Taylor (1997) estimated the flufftail population at Berga at *c.*200 pairs. This is hard to reconcile with our flushing of only ten individuals whilst rope-dragging the entire area. However, the number of flufftails that failed to flush, and therefore remained undetected, during the rope-dragging is unknown. In addition, the relatively high number of nests found (see below), especially on 31 July, and the close spacing of some of these, suggests that flufftail numbers were much higher than indicated by the rope-dragging efforts.

It was our impression that most, if not all, White-winged Flufftails flushed at both Weserbi and Berga were males, based on the bright chestnut appearance of their foreparts. However, as sexual dimorphism in plumage features is reduced in this flufftail (Taylor *et al.* 2004), with females also showing some chestnut-brown on the foreparts, this conclusion is tentative. Many of the birds flushed were not seen well but those that were all seemed to be males. No flufftails were seen on the ground.

Table 2 compares the results of our rope-dragging with comparable rope-dragging efforts made in South Africa in 2001–04 (all during the austral spring–summer periods September–February) at six of the nine major wetlands where the species has been recorded since the 1980s (although our attempts to locate White-winged Flufftails in South Africa have been singularly fruitless). African Snipe also was easily the most commonly encountered species in the South African wetlands, although its abundance was higher at Berga (10.5 snipe/60 minutes of rope-dragging vs. 17.2 snipe/60 minutes). Interestingly, Yellow-billed Duck *Anas undulata* was the second-most commonly encountered species in South Africa and the third at Berga. Overall, the South African wetlands boasted a much higher diversity of large waterbird species than Berga (30 vs. 8). This is unsurprising, as more rope-dragging was performed in South Africa (1,628 mins vs. 433 mins), over a longer time period, during periods when Palearctic migrants are present (as opposed to absent in the case of the Berga survey; although only three species at the South African wetlands were Palearctic migrants: Corncrake *Crex crex*, Wood Sandpiper *Tringa glareola* and Common Greenshank *T. nebularia*), and at more (six vs. one) and widely spread localities. The number of large waterbird individuals counted per 60 minutes of rope-dragging was similar between the South African wetlands and Berga (23.3 vs. 20.5).

Additional large waterbirds of conservation interest noted at Berga at times other than while rope-dragging were a pair of Wattled Cranes *Bugeranus carunculatus* (Vulnerable), apparently only recorded there once previously in August 1998 (Fishpool & Evans 2001), and a single Black Crowned Crane *Balearica pavonina* (Near Threatened).

African Snipe nests

We located 12 snipe nests, one at Weserbi and 11 at Berga, on 24–31 July. Nine of these contained four eggs, two had three eggs and one contained two eggs. One of the nests with three eggs obviously had been damaged by a flash-flood on the previous evening; one of the eggs had been partially displaced from the nest cup and another had been washed out of the nest and was lying adjacent to it; additional eggs may have been washed away completely. The nest with two eggs and the other with three eggs may have held incomplete clutches (no nests were subjected to follow-up visits). Taylor (1999) found 'at least 20 nests' of snipe at Berga in 1999 'most with a full clutch of four eggs'. Clutch size of African Snipe in southern Africa is typically two eggs, occasionally one or three (Maclean 1993); for the entire continent it is given as 2–3 eggs (Urban *et al.* 1986). Clutch size in Ethiopia—typically four eggs—therefore is remarkably large. Common Snipe *G. gallinago*, known only as a non-breeding migrant to Ethiopia (Urban & Brown 1971) and Africa (Urban *et al.* 1986), has a typical clutch size of four eggs (Cramp & Simmons 1982), raising the interesting, but admittedly unlikely, possibility that the snipe breeding in the Ethiopian highlands may represent this species. An examina-

tion of any specimens collected from Ethiopian highland wetlands during the boreal summer might cast further light on this issue. The Ethiopian highlands support isolated breeding populations of three other bird species characteristic of the Palearctic region: Golden Eagle *Aquila chrysaetos*, discovered only in 1993 (Clouet & Barrau 1993), Ruddy Shelduck *Tadorna ferruginea* (Ash 1977) and Red-billed Chough *Pyrrhocorax pyrrhocorax* (Urban & Brown 1971).

The snipe nests we found were located in short, dense aquatic vegetation comprising sedges, grasses and flowers (Asteraceae), including four nests in sedge tufts (one an *Eleocharis* sp.), one in a tuft of the aquatic grass *Odontelytrum abbysinicum* and one situated in the base of an aquatic flower. The nests were well-concealed pads of grasses, sedges and flower stems. Their bases were *c.*1 cm above water level. In the areas where the nests were located mean water depth was 6 cm (SD=4 cm, range 1–13 cm, *n*=12) and mean vegetation height 42 cm (SD=20 cm, range 30–100 cm, *n*=12). Mean nest diameter was 11 cm (SD=1 cm, range 10–13 cm, *n*=10) and mean egg dimensions were 40.7 × 29.3 (37.4–45.1 × 28.0–30.6, *n*=44).

White-winged Flufftail habitat

Atkinson *et al.* (1996), Tilahun *et al.* (1996), Taylor & van Perlo (1998), Fishpool & Evans (2001) and Taylor *et al.* (2004) provide general descriptions of White-winged Flufftail habitat at Weserbi and Berga marshes, including botanical details, and we have little to add to these accounts.

We recorded the habitat at those places where we flushed the ten flufftails while rope-dragging at Berga. Mean water depth was 4.9 cm (SD=2.2 cm, range 2–8 cm, *n*=9) and mean vegetation height 44.4 cm (SD=16.1 cm, range 25–80 cm, *n*=9). As mentioned above, the wetlands comprise a mixture of aquatic grasses, sedges and Asteraceae. At the ten spots from which flufftails were flushed, one comprised largely sedges, one largely Asteraceae, four a mixture of sedges and Asteraceae, and four a mix of grasses, sedges and Asteraceae. Particularly prominent grasses included *Odontelytrum abbysinicum* and a possible *Leersia* sp., and amongst prominent sedges an *Eleocharis* sp. It was our impression that an abundance of a large, leafy, yellow-flowered Asteraceae (*Trifolium*/ *Haplocarpha*/*Ranunculus* sp.?), amongst a mixture of aquatic grasses and, especially, sedges, was the most characteristic botanical feature of places where flufftails were flushed both at Berga and at Weserbi. At Berga most flufftails were flushed in fairly deep water close to the main watercourse in the central half of the wetland, in areas characterised by a particular abundance of Asteraceae, relative to the shallower outer half of the wetland, characterised by an apparently greater preponderance of sedges.

White-winged Flufftail nests

Seven White-winged Flufftail nests were located at Berga, one each on 25 and 26 July and five on 31 July. The first nest was shown to us by local people, the second was found while rope-dragging and the five nests located on 31 July were all found by local people who joined us in a casual search for nests on that day covering only a relatively small section of the marsh. All but one of the nests was empty and apparently still under construction.

The active nest (Fig. 4), located on 31 July, was *c.*100 m from the main watercourse, in a waterlogged area covered by dense aquatic vegetation *c.*40 cm high, comprising aquatic grasses, sedges and Asteraceae. Water depth was less than 1 cm. The nest was built in a sedge (*Cyperus* sp.) tuft 40 cm high. It was a ball-shaped structure and its base was set *c.*1 cm above ground level with a side entrance. Live plant stems had been pulled over the top and woven together to form a dome. Nest dimensions were: width 12 cm, height 17.5 cm, entrance width 5.5 cm, entrance height 6.5 cm, interior width 8.5 cm, interior height 8.5 cm. The entrance faced south. The nest contained four unmarked, ivory-white eggs. Egg measurements and weights were: 29.3 × 19.8 (5.5 g), 28.9 × 20.2 (5.8 g), 28.8 × 20.1 (5.8 g) and 28.4 × 19.9 (5.3 g).

The six empty nests were all found in the same general area and habitat, and were similar in structure. Additional details were noted for three of these. Two were in sedge tufts and a third was interwoven between sedge and aquatic grass tufts. Tuft height was 40–45 cm (*n*=3). The bases of the nests were 1–4 cm above ground level (*n*=3). Nest dimensions were: width 12–14 cm, height 14–19 cm, entrance width 5.0–8.5 cm, entrance height 6.0–9.0 cm, interior width 8.9–9.0 cm, interior height 9.5–11.0 cm (*n*=3). Entrance aspects were south (*n*=1), north-west (*n*=1) and

north-east (n=1). One nest was only *c.*5 m from another and a third was *c.*30 m from these two.

No flufftails were seen at any of these nests, although a few were flushed in the general area. The nests were situated in the shallower outer half of the wetland (water depth less than 1 cm), largely away from the deeper, more central parts of the marsh (water depth 2–8 cm, mean 4.9 cm) where we flushed most flufftails.

Taylor (1999) and Allan (2004) present brief popular descriptions of the nests and eggs of White-winged Flufftails from Berga, both accompanied by photographs. Taylor *et al.* (2004) provide a more formal description of a single nest, the same as that covered by Taylor (1999). The nest was *c.*60 m from the main watercourse in aquatic vegetation 30–45 cm tall and dominated by the sedge *Eleocharis marginulata*, a grass species and a flower *Ranunculus* sp. Tuft height was 40–45 cm. The nest was 1 cm above ground in an area with water depth 1–5 cm. It was a ball-shaped structure constructed of live *Eleocharis*, grass and *Ranunculus* leaves. Nest dimensions were: width 15 cm, height 17.5 cm, entrance width 4.8 cm, entrance height 5 cm, interior width 9.8 cm, interior height 9.4 cm. The complete clutch consisted of six unmarked white eggs, suggesting that the clutch we found may have been incomplete, and the eggs were laid in mid-August 1999. Dimensions and weights of three eggs were: 27.2 × 19.8 (5.47 g), 27.3 × 20.0 (5.65 g) and 27.8 × 19.9 (5.78 g). In all respects, the breeding habitat, nest and eggs described by Taylor *et al.* (2004) are similar to those found by us.

Searches for potential new White-winged Flufftail breeding sites

Our relatively brief search for potential new White-winged Flufftail breeding sites comprised a two-day trip starting 29 July. We travelled from Addis Ababa north-east to Debre Birhan, where we over-nighted, and then west to the Fitche area, before returning to Addis Ababa late on 30 July. The main, and apparently only, roads between these three urban centres were followed. The total distance covered was 435 km. We stopped the vehicle and walked potentially suitable wetland areas visible from the roads. Six sites were examined at the following localities: 09°15'N 39°12'E, 09°16'N 39°14'E, 09°30'N 39°27'E (Hadewa Shet River), 09°36'N 39°30'E (International Livestock Research Institute, Debre Birhan Station); 09°49'N 38°35'E (Arkiso River) and 09°34'N 38°51'E. No White-winged Flufftails were found at any of these sites. The first two localities were extremely small and unlikely candidates for the species. The other four were larger and parts of extensive wetland systems. All but one of these, however, were heavily grazed by livestock and did not present suitable vegetation height and density. The exception, the wetland at the International Livestock Research Institute 9 km south of Debre Birhan, presented an extensive wetland area with some potentially suitable patches of habitat. Snipe were drumming at this site, the only place where we found this away from Weserbi and Berga. An intensive walk around the wetland over several hours, however, failed to produce any flufftails and the vegetation was perhaps too short, sparse and patchy overall, and the wetland too deeply flooded and channeled in many areas. This wetland was entirely fenced, with surrounding livestock excluded, hence its relatively tall aquatic vegetation.

This route had already been covered by Dr Barry Taylor accompanied by one of us (MW) in earlier searches for the flufftail, although the Arkiso River site apparently was the only locality where our actual searching efforts overlapped.

White-winged Flufftail stomachs and predation—a correction

Allan (2004) reported on observations made during our visit to Weserbi, on 24 July, of an Augur Buzzard *Buteo augur* capturing a flushed White-winged Flufftail, and on the collection of three stomachs of flufftails, one apparently from the captured flufftail, all apparently discarded by the buzzard while feeding on the birds. A subsequent detailed examination revealed that the stomachs were of rodents. The exact sequence of events was that one of our party (Deon Coetzee) observed the Augur Buzzard capturing a flushed flufftail as it landed in a sparse wheat field adjacent to the wetland. He flushed the buzzard, and picked up several flufftail feathers displaced by it when the flufftail was caught. The buzzard flew off with the flufftail to a low bush in the wetland. A local herdsman then ran to the bush, again flushing the buzzard which flew off with the flufftail. The herdsman picked up several more flufftail feathers from below the bush, as well as a stomach. We

thus assumed the stomach to have come from the flufftail and ascribed the other two lone stomachs found elsewhere in the wetland as also coming from flufftails. It seems probable that the buzzard was, in fact, feeding primarily on rodents and that the capture of the flufftail was an isolated and 'unnatural' incident related to our disturbance of the birds. The comments in Allan (2004) as to the over-grazed nature of the wetland having resulted in this predation of the flufftails by the buzzard therefore are groundless.

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Status of Shoebill *Balaeniceps rex* in Malagarasi, Tanzania

Lars Dinesen[a] and Marc Baker[b]

Statut du Bec-en-sabot du Nil *Balaeniceps rex* à Malagarasi, Tanzanie. En Tanzanie, le site de Malagarasi est le plus important pour la survie du Bec-en-sabot du Nil *Balaeniceps rex* et est supposé abriter la plus grosse population de l'espèce en dehors du Sudd au Soudan. Les tentatives pour estimer la taille de cette population semblent cependant avoir résulté en de considérables surestimations. L'examen de la littérature et les comptages aériens réalisés en novembre 2001 par les auteurs suggèrent que la population de Malagarasi ne comprendrait que quelques centaines d'oiseaux seulement. Les comptages aériens de 2001 ont également montré que l'étendue de certaines zones humides à Malagarasi avait été sérieusement surestimée. Les auteurs considèrent donc que le changement du statut de conservation du Bec-en-sabot de 'Quasi-menacé' en 'Vulnérable' (espèce dont la population entière compte moins de 10.000 individus) est justifié. Le Bec-en-sabot du Nil a une répartition restreinte, s'étendant du sud du Soudan au nord de la Zambie et de la République Démocratique du Congo orientale à la Tanzanie occidentale, et l'espèce est menacée dans tous les sites importants, comme les marais du Sudd, Malagarasi, Bangweulu et en Ouganda. Un protocole est proposé pour les futurs comptages aériens du Bec-en-sabot, afin de définir les zones principales occupées par l'espèce et d'effectuer des comptages complets.

Summary. The Malagarasi ecosystem is the stronghold for Shoebill *Balaeniceps rex* in Tanzania and is believed to host the largest population of the species outside the Sudd in Sudan. However, attempts to establish population numbers in Malagarasi seem to have resulted in considerable over-estimations. A review of the literature and aerial counts in November 2001 by the authors suggest that the Malagarasi population might comprise 100 or a few hundred birds only. The aerial survey in 2001 also revealed that previous estimates of the extent of certain wetland habitats in Malagarasi have been significantly overestimated. The authors therefore support the upgrade of the conservation status of Shoebill from Near Threatened to Vulnerable, i.e. with a total population of less than 10,000 individuals. Shoebill has a limited range from southern Sudan to northern Zambia and from eastern DR Congo to western Tanzania, and the species is threatened at all its main localities e.g. the Sudd swamps, Malagarasi, Bangweulu and in Uganda. A design for future aerial surveys of Shoebill is proposed focusing on identifying core areas for the species and comprehensive counts.

Shoebill *Balaeniceps rex* has a discontinuous distribution, restricted mainly to a few large permanent wetlands from southern Sudan, Uganda, eastern DR Congo and northern Zambia to western Tanzania. Its world population was estimated at only *c.*1,500 individuals two decades ago (Brown *et al.* 1982), and at *c.*11,000 (Elliott 1992) or 12,000–15,000 in 1986 (Collar 1994, Rose & Scott 1994, BirdLife International 2000). This apparent increase was due to the use of new census methods, including aerial surveys. In 2002, however, the population was estimated at 5,000–8,000 birds and declining, based on new information (Delany & Scott 2002).

The Tanzanian population was estimated at maximum 2,500 individuals, based on aerial surveys by the Tanzania Wildlife Conservation Monitoring (TWCM, now Conservation Information Centre under Tanzania Wildlife Research Institute (TAWIRI) between 1990 and 2000 (Tanzania Wildlife Conservation Monitoring 1991, 1998, 1999 and unpubl., Jones & Hill 1994a, Collar 1994, Baker 1996, BirdLife International 2000). The prime locality for Shoebill in Tanzania are the permanent swamps and inundated floodplains along the Moyowosi, Nikonga, Kigosi, Igombe, Ugalla and Malagarasi rivers (hereafter: the Malagarasi) forming a mosaic of wetlands in western Tanzania (Fig. 1).

The Malagarasi was listed as a Ramsar site in August 2000, when Tanzania ratified the Convention on Wetlands (Ramsar 1971), and the

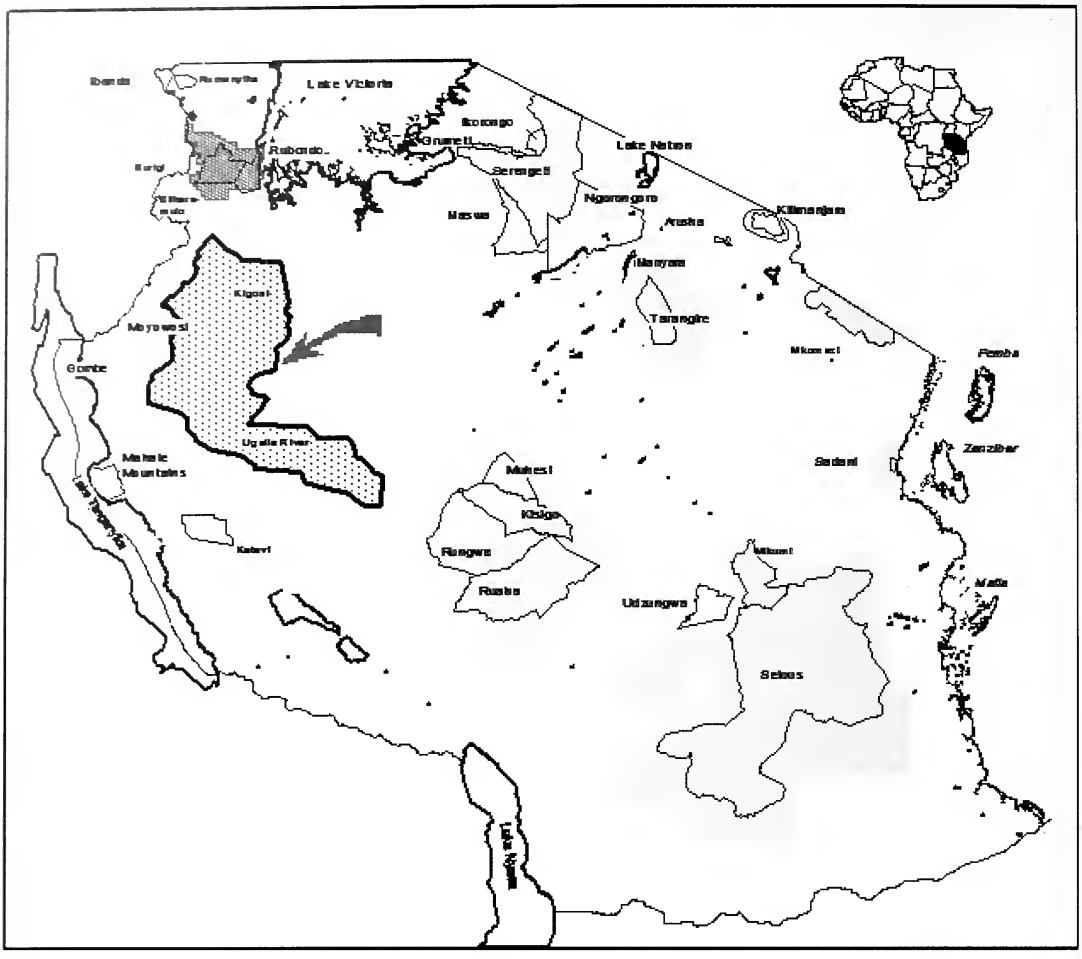

Figure 1. Map of Tanzania showing protected areas and the Malagarasi-Muyovozi Ramsar sites.
Carte de la Tanzanie indiquant les aires protégées et le Site Ramsar Malagarasi-Muyovozi.

designated area covers *c.*32,500 km^2. The main rationale was that it supports 'appreciable numbers of rare, vulnerable or endangered species' such as Shoebill, Wattled Crane *Bugeranus carunculatus*, Sitatunga *Tragelaphus spekei* and Slender-snouted Crocodile *Crocodylus cataphractus* (Anon. 1994a,b, Jones & Hill 1994a). However, it is recognised that additional research is needed to establish more precise population numbers and distribution patterns of these species. This paper focuses on Shoebill and is based on field work on the ground in 1995, aerial transect counts in November 2001, subsequent visits in 2002–03 and a review of the existing literature.

Study area

A large part of the Malagarasi ecosystem was included in the Malagarasi-Muyovozi Ramsar sites with the notable exception of the outlet of the Malagarasi River into Lake Tanganyika. The site includes a number of permanent rivers, such as the Moyowosi, Nikonga, Kigosi and Igombe in the north-east, the Malagarasi in the north and the Ugalla in the south-east, and adjacent floodplains. The rivers meet in a central area, where the lakes Sagara (328 km^2) and Nyamagoma (53 km^2) are located (Tanzania Wildlife Research Institute 2002). From the lakes the water flows west for *c.*100 km as the Malagarasi River, until it forms a delta when flowing into Lake Tanganyika. The

Malagarasi watershed forms *c.*30% of the Lake Tanganyika catchment (Tanzania Wildlife Research Institute 2002) and is the second-largest river basin in Tanzania after the Rufiji. Three game reserves lie within the Ramsar site: Ugalla (5,000 km^2), Kigosi (9,000 km^2) and Moyowosi (11,000 km^2). There are no legal settlements in the game reserves and access is limited to trophy hunting by foreign tourists. Seasonal fishing and beekeeping by local communities are undertaken in Ugalla via a dispensation from the Wildlife Division. During an aerial survey in 2001, in which the authors participated, it was estimated that only 13% of the Ramsar site constitutes wetland habitats: open water (lakes and rivers) 0.6%, permanent swamp 3.2% and seasonally inundated grassland 9.2% (Tanzania Wildlife Research Institute 2002). Thus the site comprises mainly Miombo woodland (*Julbernardia–Brachystegia*: 65%), with pockets of riverine forests and *Combretum* and *Acacia* bushland. The extent of papyrus swamps was estimated at 480–900 km^2 (Tanzania Wildlife Research Institute 2002), which is far less than the previously proposed figure of 2,000 km^2 (Anon. 1994b). Permanent swamps were estimated at 1,335 km^2 (based on an aerial transect survey) or 1,625 km^2 (based on 1:250,000 land cover maps prepared from satellite images) (Tanzania Wildlife Research Institute 2002). A previous estimate of 3,200 km^2 for the northern Moyowosi and Kigosi Game Reserves alone again appears to be a considerable overestimate.

Material and methods

Ground survey in 1995

The major wetlands in Tanzania were surveyed by 17 teams in 1995 in the first comprehensive waterbird count in the country (Baker 1996), which included the first ground-based waterbird survey of the eastern part of the Malagarasi ecosystem.

Aerial surveys in 1971 and 1990s

The population of Shoebill in Malagarasi was first estimated by an aerial survey in 1971 (Parker 1984). In the 1990s it was estimated by aerial surveys using Systematic Reconnaissance Flights (Tanzania Wildlife Conservation Monitoring 1991, 1998, 1999 and unpubl., Jones & Hill 1994a) and the methodology described in Norton-Griffith (1978). These surveys were undertaken by TWCM in the Moyowosi and Kigosi Game Reserves during counts of large mammals and were not specifically designed for Shoebill. However, specific attention was paid to Shoebill and Wattled Crane during surveys in September 1990, November 1992 and June 1993, and a helicopter was used in the 1992 counts in some of the areas (observers unknown, Jones & Hill 1994a). The surveys in the 1990s are difficult to compare with each other and impossible to compare with other surveys because of the wide variation in methodology, observer expertise, areas covered and areas used for extrapolation (Jones & Hill 1994a).

Aerial survey in 2001

The Ramsar site, covering the vast majority of the Malagarasi ecosystem, was surveyed on 17–28 November 2001, at the end of the dry season, when water levels were at their lowest. A Systematic Reconnaissance Flight (SRF) was conducted with two Cessna 182 aircraft flying at a nominal altitude of *c.*100 m (actual range *c.*60–300 m) and a mean speed of 200 km/h. Norton-Griffiths' (1978) methodology was used. A total 76 transects with a total length of *c.*8,000 km were flown. Transects were spaced 5 km apart. Both aircraft flew *c.*6–7 hrs per day, including an average of 1.5–2.0 hours to and from base. One skilled birder operated as rear-seat observer in each of the two planes (M. Baker and J. Anderson); the other rear-seat observer was a member of the TWCM unit specialised in counting mammals. Observations were limited to the strip of land visible between two markers attached to the wing struts. Each transect was divided in sub-units of 30 seconds. The rear-seat observers recorded all wildlife, selected bird species and human activities in a small tape-recorder. These data were subsequently transcribed onto data sheets and analysed using Herd Count 2000 software developed for SRF surveys. However, the combined total area of the observation strips of the two aircraft for all sampled transects covered only *c.*6–7% of the Ramsar site. The counts were extrapolated to cover the whole survey area using Jolly's Method 2 of Unequal Sized Units (Jolly 1969) including the 95% confidence intervals. Incomplete transects were not included in the final data analysis. Surveys in the 1990s used a

similar census and data analysis methodology. Additionally, L. Dinesen undertook an opportunistic morning and afternoon count at the end of the survey in some selected core areas for Shoebill, and had spent 14 days counting waterbirds in Malagarasi in January 1995.

Results

The surveys in the Malagarasi ecosystem between 1972 and 2001 involving Shoebill counts can be grouped into six categories. All Shoebill counts are summarised in Table 1.

1) An aerial count in 1971 (Parker 1984), which estimated the Shoebill population at 'more than 300 birds' within an estimated 200 km^2 of suitable habitat.
2) Six aerial wildlife counts (SRF) undertaken by TWCM between 1990 and 2000 aimed at estimating large-mammal populations in Moyowosi and Kigosi Game Reserves. All Shoebills or cranes were also counted. Population estimates vary from 2,260 Shoebills in 1990 to 235 in 1998 following massive extrapolations. However, the areas covered by the surveys varied from 3,771 km^2 to 21,870 km^2 and so does the extent of Shoebill habitat used as the basis for the extrapolations.
3) The survey in 2001 of the 32,500 km^2 Ramsar site, using similar methods as under 2 and resulting in an estimate of 134 Shoebills.
4) A total count in 1992 carried out by helicopter with specific focus on Shoebill and Wattled Crane. The presumed core areas were covered and 578 birds counted (Jones & Hill 1994a). Extrapolation resulted in an estimated population of 2,489 birds, the highest estimate for the Malagarasi.
5) A ground count of accessible swamps in the eastern part around Lakes Sagara, Nyamagoma and Masimba as part of the nationwide wetlands survey in 1995 (Baker 1996). This produced 44 Shoebills, with concentrations in Lumbe and Masimba.
6) A rapid one-day aerial count in November 2001 in perhaps less than half of the expected Shoebill core areas produced 56 birds.

The surveys in 1971, 1992 and 2001 (Parker 1984, Jones & Hill 1994a, this study) and ground surveys in 1995 (Baker 1996) revealed, unsurprisingly, a clumped distribution of Shoebills, often located in 'bays' of permanent grassland swamps (not papyrus) fringed by Miombo woodland. Based on these surveys the key areas for Shoebill in Malagarasi are largely known.

Table 1. Shoebill numbers recorded and estimated during aerial surveys in the Malagarasi ecosystem 1971–2001.
Tableau 1. Nombre de Becs-en-sabot du Nil *Balaeniceps rex* comptés et estimés pendant les comptages aériens dans l'écosystème de Malagarasi en 1971–2001.

	1971	1990	1992	1993	1994	1995	1998	2000	2001	2001
Estimate	**300+**	**2,258**	**2,489**	**1,028**	**689**	**723**	**235**	**997**	**134**	**none**
SE		±899	±642	±443	±241	±102		±296	±46	
Actual count		**78**	**578**	**35**	**45**	**61**	**15**	**136**	**9**	**56**
Time of year	Aug	Sep	Nov	June	Wet	Dry	May	Dry	Nov	Nov
Areas covered*	SA	GRs	SA	GRs	GRs	GRs	GRs	GRs	RS	SA
Method**	TC	SRF	TC	SRF	SRF	SRF	SRF	SRF	SRF	TC
Area covered (km≈)		20,183	2,125	4,188	21,870	3,771	21,870	21,666		

Sources: 1971: Parker (1984); 1990: Tanzania Wildlife Conservation Monitoring (1991); 1992: Jones & Hill (1994a,b); 1993: Jones & Hill (1994a,b); 1994: Tanzania Wildlife Conservation Monitoring unpubl. via Baker (1996); 1995: Tanzania Wildlife Conservation Monitoring unpubl. via Baker (1996); 1998: Tanzania Wildlife Conservation Monitoring (1999); 2000: unpubl.; 2001: Tanzania Wildlife Research Institute (2002).

* GRs = Moyowosi/Kigosi Game Reserves; RS = Malagarasi-Muyovozi Ramsar Site; SA = Specific Areas, considered to be core areas for Shoebill. ** SRF = Transect count; TC = Total count.

Figure 1. Fisherman in Lumbe swamp, Malagarasi; the number of users in the Malagarasi floodplains has increased dramatically in recent decades placing natural resources under pressure (Lars Dinesen)

Un pêcheur dans le marais de Lumbe, Malagarasi; l'augmentation importante du nombre d'utilisateurs des zones humides de Malagarasi pendant les dernières décennies constitue une menace pour les ressources naturelles (Lars Dinesen)

Figure 2. The survival of Shoebill *Balaeniceps rex* in Malagarasi requires 'realistic' conservation planning, education and awareness-raising, and a portion of luck (Lars Dinesen)

La survie du Bec-en-sabot *Balaeniceps rex* à Malagarasi dépend de la planification réaliste des actions de conservation, d'éducation et de sensibilisation, et une part de chance (Lars Dinesen)

Figure 3. Shoebill *Balaeniceps rex* has been brought to the brink of extinction within *c.*150 years since explorers reached the interior of the continent (Lars Dinesen)

Environ 150 ans après l'arrivée des explorateurs dans l'intérieur du continent, le Bec-en-sabot *Balaeniceps rex* est au bord de l'extinction (Lars Dinesen)

Discussion

The Malagarasi Shoebill population

The variation in estimated numbers (ranging from 134 in 2001 to 2,489 in 1994) prompts two questions: (1) What is the actual population size of Shoebill in the Malagarasi? and (2) What is the population trend since the first survey in 1971. Moreover, it seems crucial to know whether seasonal movements to areas outside the Malagarasi ecosystem could explain the variation, as suggested by Jones & Hill (1994a).

There are no indications of migration out of Malagarasi. Although there are sightings of Shoebills outside the Malagarasi ecosystem (Baker 1996, Tanzania Wildlife Research Institute 2002) and outwith other possible breeding grounds in Tanzania, e.g. the Kagera and Mara swamps, there is no evidence for regular seasonal migration, neither from this nor from other localities (Guillet 1978, Brown *et al.* 1982, Elliott 1992). However, it is expected that birds make local movements in relation to seasonal flooding regimes, food availability and disturbance. A study in southern Sudan by Guillet (1978) found that birds move seasonally between nesting and fishing sites, according to the flood regime. Odd records in Tanzania are more likely caused by adverse situations, e.g. birds leaving their home range in dry years due to extensive fires. Under the reasonable assumption that the bulk of Shoebills is confined to the Malagarasi ecosystem we think that the extrapolated numbers (under points 2 and 3) are crude at best. The basis for extrapolation over such large areas is thin because the distribution of Shoebill is discontinuous in space and time. The actual numbers counted are small (9–136 in six surveys) and the surface area used for extrapolation follows protected area boundaries rather than the extent of suitable habitat. Moreover, there are

major differences in observer skills and most counts were undertaken as part of large-mammal surveys.

A total count attempted partly by helicopter in 1992 resulted in 578 birds counted (Jones & Hill 1994a) and densities reported of 5 birds/km^2 in an area of 65 km^2 and a estimated total of 2,489 individuals. These figures appear crude because Shoebill is considered to be a solitary bird (Brown *et al.* 1982, Elliott 1992, Collar 1994). Parker (1984) estimated 0.64 Shoebills/km^2 in suitable habitat in Moyowosi in 1971. Howard & Aspinwall (1984) counted 23 singles and five pairs in the Bangweulu swamps in Zambia during a Lechwe *Kobus leche* survey. The sightings by the authors in 1995 (44 birds) and 2001 (65 birds) in Malagarasi were of singles or pairs, although a clumped distribution was observed. The densities of other large swamp birds such as Wattled Crane and Saddle-billed Stork *Ephippiorhynchus senegalensis* in prime habitat in the Okavango, Botswana, were 0.12 and 0.10 per km^2 respectively (Craig & Gibson 2001). We therefore suggest a survey designed specifically for Shoebill based primarily on total counts and conducted by experienced birdwatchers (see Appendix).

There has been a huge expansion of human activities in Malagarasi in recent decades (Mutch 1977, 1980, Anon. 1994a,b, Jones & Hill 1994a,b, Tanzania Wildlife Conservation Monitoring 1998, Tanzania Wildlife Research Institute 2002) and a decline in Shoebill population is to be expected. The species is specialised in both its feeding and nesting habits, and vulnerable to disturbance. It requires special fishing sites with solid platforms, standing water, plenty of fish and long periods of undisturbed fishing in order to secure adequate quantities of food (Guillet 1978). Information from the Sudd indicates that the bird is intolerant of even a low level of human disturbance (Guillet 1978). In Malagarasi large areas of Miombo woodland adjacent to the swamps are being cleared for tobacco farming and agriculture, and the human population, consisting of farmers, fishermen, refugees and semi-nomadic Watutsie pastoralists, has increased very rapidly in recent decades. Hunting companies reported that the annual dry-season burnings and cattle grazing in the core area of the Shoebills (southern Moyowosi and Kigozi) are severe and expanding. The first rice paddies were seen to appear at the edge of key Shoebill swamps. However, quantitative land use data are lacking. Guillet (1978) considered fire and cattle to be the main threats in the Sudd. There are no data on breeding success from Malagarasi, but it is of concern that the long-living Shoebill has a low reproduction rate and non-productive populations may exist for decades in formerly productive areas.

Global conservation status

The Shoebill's main global stronghold is the Sudd swamps in southern Sudan, where a total of 6,407 birds was counted in 1979–82 (Robertson 2001). Guillet (1978) warned that the rapid growth of the human population jeopardised the survival of Shoebill here. A serious additional threat is the planned Jonglei canal, which will drain a large part of the swamp. Uganda has *c.*400–600 birds, confined mainly to papyrus swamps (Elliott 1992). A cautious estimate of the populations in western Tanzania (Malagarasi) and northern Zambia (Bangweulu) gives not more than a few hundred birds for each site (Howard & Aspinwall 1984, Collar 1994, Leonard 2001, this study) and both populations are under increasing pressure. The populations in Mara in Tanzania, Akagera in Rwanda/Tanzania, and localities in eastern DR Congo are much smaller and, in the latter sites, under significant pressure due to the civil unrest (Kanyamibwa 2001). In sum, the handful of core Shoebill populations are under increasing threat due to disturbance, conversion of swamp habitat and locally from collectors (see also Elliott 1992 for a review) and nowhere is its survival secure. We therefore strongly support the upgrade of its global conservation status from Near Threatened (BirdLife International 2000) to Vulnerable (VU C1) (IUCN 2001, BirdLife International 2004) i.e. a population of fewer than 10,000 mature individuals and a decline of more than 10% in three generations. Although there is no hard evidence for a 10% decline, empiric reports from the core localities indicate a serious and steady decline in all sub-populations. More importantly, conservation actions should target the few key wetlands in Zambia, Tanzania, Uganda and Sudan where the species has a reasonable chance to survive.

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Appendix 1. Proposed survey design
Annexe 1. Protocole pour les comptages aériens futurs

All Shoebill observations by the authors (*N*=109) in the Malagarasi ecosystem have been in waterlogged grassland. The stronghold is the permanent swamp areas formed by the Moyowosi, Nikonga and Gombe Rivers in and south of the Kigosi and Moyowosi Game Reserves (Jones & Hill 1994a,b). We recommend aerial surveys using a stratified approach with a high focus on total counts in the permanent swamps and floodplains of the ecosystem. This should be possible within one or two weeks, depending on the season and keeping in mind that the maximum extent of Shoebill habitat is *c.*4,225 km^2 and the area of permanent swamp *c.*1,040 km^2. Because Shoebill is dependent on water for both feeding and nesting, only the waterlogged plains need to be surveyed. At the end of the wet season, in April–May, a large area is flooded and this coincides with the expected breeding time. Shoebill has been recorded breeding in Malagarasi on a few occasions (Jones & Hill 1994a,b). Pre-count reconnaissance flights using a few days should be undertaken to potential Shoebill areas before a final decision on specific count areas is taken. Flight transects should be *c.*500 m apart (Craig & Gibson 2001) and flights should be at *c.*250 m altitude in a high-winged aircraft. In Malagarasi individual count areas should follow the different floodplains. Count areas in key areas should be covered 100% and, depending on the resources, count categories could perhaps be planned with 50% (each second line) and as a minimum of 25% (each fourth line) coverage respectively. However, it is recommended as a minimum that half the survey area is covered 100%. Two skilled birdwatchers should be rear-seat observers and record Shoebills on a dictaphone, while a front-seat observer would record the count area codes and coordinates of all end points. Attempts to count other waterbirds or mammals should be avoided. In the data analysis of the Wattled Crane population in the Okavango, Jolly's (1969) method for sample units of unequal size was used to calculate estimates of density and variance (Craig & Gibson 2001), and a similar method should be used in the analysis of the 50% and 25% sampled count areas. Surveys should be undertaken in both the dry and wet seasons, and indication of breeding should be noted (expected to be in the peak wet season, in April/May onwards).

Sierra Leone Prinia *Schistolais leontica* in the Fouta Djalon of Guinea, its song, distribution and taxonomic status

C. R. Barlow[a], R. B. Payne[b], L. L. Payne[b] and M. D. Sorenson[c]

Prinia de Sierra Leone *Schistolais leontica* dans le Fouta Djalon, Guinée, son chant, sa distribution et son statut taxonomique. Un couple de Prinias de Sierra Leone *Schistolais leontica* a été observé le 10 octobre 1999 près de Dalaba, dans le Fouta Djalon, Guinée (11°40'N 12°17'W). Un des oiseaux, qui a pu être capturé, avait une becquée d'insectes et présentait une plaque incubatrice. Ceci constitue une extension considérable vers l'ouest de l'aire de répartition de cette espèce menacée, ainsi que la première donnée de nidification. Un sonogramme du chant est présenté et comparé à celui de la Prinia à gorge blanche *S. leucopogon*, espèce présentant un comportement et un chant en duo semblables. Les différences vocales et génétiques prouvent toutefois qu'il s'agit bien de deux espèces distinctes.

On 10 October 1999 we observed a pair of small grey warblers at the edge of a village *c.*1 km north-west of Dalaba, Guinea, at 1,160 m (11°40'N 12°17'W), which we identified as Sierra Leone (White-eyed) Prinias *Schistolais leontica.* The birds had a long tail and rounded wings, a whitish belly, distinctly buff flanks, a thin black bill, relatively long pink legs, and a cream-white iris (Figs. 2–3). They occurred together in thickets near a trail and stream by the edge of forest; they did not enter the forest (Fig. 1). One bird was carrying insects and, when captured, was found to have an active brood patch. Its tail was bent to one side, indicating it was attending a covered nest which was not found. When moving through the vegetation, the birds held the tail low, not cocked over the back; the two species of *Schistolais* war-

Figure 1. Habitat within 10 m of Sierra Leone Prinia *Schistolais leontica* near Dalaba, Guinea, with dense thickets, rocky outcrops and disturbed forest (Laura Payne)

Habitat situé à 10 m de la Prinia de Sierra Leone *Schistolais leontica* près de Dalaba, Guinée, avec des bosquets denses, des affleurements rocheux et de la forêt dégradée (Laura Payne)

Figures 2–3. Sierra Leone Prinia *Schistolais leontica* near Dalaba, Guinea, 10 October 1999 (Laura Payne)

Prinia de Sierra Leone *Schistolais leontica* près de Dalaba, Guinée, 10 octobre 1999 (Laura Payne)

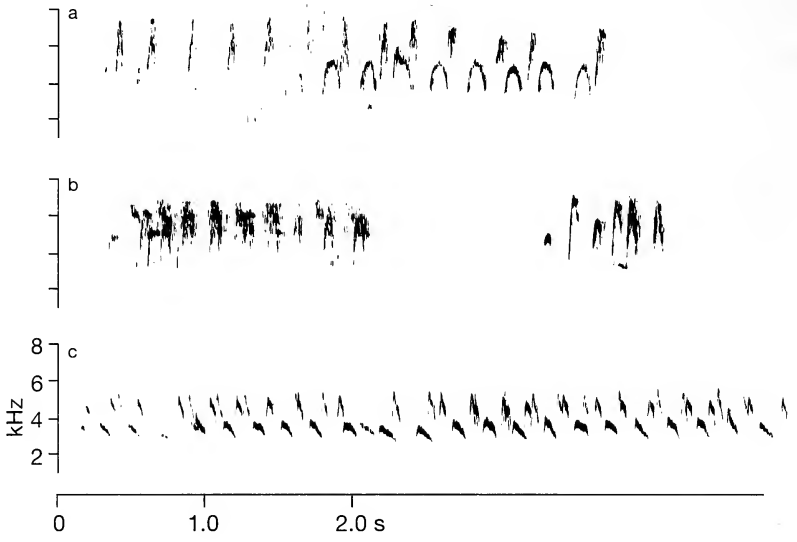

Figure 4. Sonograms of Sierra Leone Prinia *Schistolais leontica* and White-throated Prinia *S. leucopogon*. **A**: song of Sierra Leone Prinia at Dalaba, Guinea (original recording by CB on Sony TC-D5M recorder with Beyer M69 microphone in 33 cm parabola); **B**: song of Sierra Leone Prinia at Mt Nimba, Liberia (Chappuis 2000); **C**: song of White-throated Prinia at Garoua Boulai, Cameroon (Chappuis 2000). Sonograms generated with Kay Electrics DSP Sona-Graph 5500 and Printer 5509, at 234 Hz.

Sonogrammes de la Prinia de Sierra Leone *Schistolais leontica* et la Prinia à gorge blanche *S. leucopogon*. **A**: chant de la Prinia de Sierra Leone à Dalaba, Guinée (enregistrement original par CB avec un enregistreur Sony TC-D5M et un microphone Beyer M69 dans une parabole de 33 cm); **B**: chant de la Prinia de Sierra Leone au Mont Nimba, Liberia (Chappuis 2000); **C**: chant de la Prinia à gorge blanche à Garoua Boulai, Cameroun (Chappuis 2000). Sonogrammes réalisés avec Kay Electrics DSP Sona-Graph 5500 et imprimante 5509, à 234 Hz.

blers, *S. leontica* and White-chinned Prinia *S. leucopogon*, differ in this behaviour from warblers in the genus *Prinia* (Irwin 1997). Although Bates (1931) described *S. leontica* 'cocking their tails', Irwin (1997) suggests *Schistolais* simply raise the tail over the back.

The birds sang both singly and together. The vocalisations were recorded and sonograms are presented here for the first time (Fig. 4a). When duetting, they uttered their notes at different rhythms, and the notes of the two birds were not closely synchronised. The songs recorded at Mt Nimba, Liberia, by Stuart Keith, were described as 'a tuneless, unstructured, unsynchronized duet; one bird gives rapid, high-pitched 'sipsipsipsip...' and the second bird gives a lower, nasal, measured 'bur-bur-bur-bur...'.' (Irwin 1997). Two of the three songs on Chappuis (2000) show the same phrasing and sequence of notes, so there is some repeated structure in the song (Fig. 4b). Songs at Mt Nimba and Dalaba were similar, and it appears these songs are species-typical. Song duets of Sierra Leone Prinia differ from those of its congener, the Central African White-chinned Prinia, whose notes are lower pitched (the short notes 5 vs. 7 kHz; the long notes 3–4 kHz vs. 4–5 kHz), and have a narrower frequency envelope (the short notes 1.0–1.5 kHz vs. 3–4 kHz; the long notes 1 kHz vs. w kHz) (Fig. 4c). The irregular sequence of the higher pitched notes in Fig. 4 show that two birds independently gave the notes each at a different rhythm, and neither bird was in tight synchrony with the rhythm of a third bird with the lower, longer notes. Another recording from Foumban, Cameroon (Chappuis 2000), indicates two birds giving the lower notes at different rhythms, and a third bird giving the high notes at a third rhythm.

White (1962) considered Sierra Leone and White-chinned Prinias to be the same species, as did Morel & Morel (1988) when listing '*leucopogon*' for Guinea. However, the two differ in size (*leontica* being smaller) and appearance (Irwin 1997), and their songs are distinct. In molecular genetic analyses, the two *Schistolais* are more closely related to the genera *Camaroptera* and *Apalis* than to *Prinia subflava* and *Cisticola* spp. (Sefc *et al.* 2003). The genetic sequences of their mitochondrial ND2 gene are *c.*4% divergent (Sefc *et al.* 2003), reflecting a historical divergence of perhaps two million years for the two species. The warbler lineages *Schistolais* and *Apalis*, *Prinia* and *Cisticola* are included in the family Cisticolidae in Sibley & Monroe (1990), Sefc *et al.* (2003) and Dickinson (2004). Although Urban *et al.* (1997) included all within the family Sylviidae, recent genetic analyses suggest this assemblage, were it monophyletic, would include certain babblers and white-eyes *Zosterops* as well (Cibois *et al.* 1999, Sefc *et al.* 2003, Barker *et al.* 2004). *Schistolais* and many *Apalis* sing in duet. In contrast, most warblers of the genus *Prinia*, such as *P. subflava*, sing alone rather than in duet (Irwin 1997), although Banded Prinia *P. bairdii* regularly duets (Brosset & Erard 1986). Duetting behaviour in songbirds is involved in maintaining an exclusive pair-bond, and the distribution of duetting song tends to follow systematic relatedness rather than certain habitats (Payne 1971, Farabaugh 1982, Smith 1994, Langmore 1998, Slater *et al.* 2002).

The observation at Dalaba constitutes a considerable range extension and also the first breeding record of this globally threatened species, which is categorised as Vulnerable (Irwin 1997, BirdLife International 2004). Considered 'very local and uncommon' (Irwin 1997), its previously known range included north-east Sierra Leone, south-east Guinea (Pic de Fon and Mt Nimba), northern Liberia (Mt Nimba and other ranges in northern Nimba county) and western Côte d'Ivoire (Bates 1930, 1931, Colston & Curry-Lindahl 1986, Gatter 1997, Irwin 1997, Demey & Rainey 2004). Pic de Fon (08°31'N 08°54'W) is *c.*500 km from Dalaba; Birwa Peak, in the Tingi Mountains, Sierra Leone (08°54'N 10°48'W), from where the species first was described (Bates 1930), is 339 km distant. Bates (1931) also collected it near Saiama, in southern Guinea just across the Sierra Leone border. The species' range coincides with the inland massifs and an annual rainfall of 2,000–2,600 mm (Gwynne-Jones *et al.* 1978, Gatter 1997). Dalaba lies on the rugged, rocky massif of the Fouta Djalon, which extends as an inland plateau through western Guinea south into north-east Sierra Leone. The habitat of wet thickets and patches of secondary forest among granitic outcrops, ravines and ridges, of which we only briefly sampled a small area around Dalaba during our visit in October 1999, occurs throughout the Fouta Djalon and the species may well occur elsewhere in the region.

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First reliable sound recording of Golden Nightjar *Caprimulgus eximius*, in the rocky hills of central Mali

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Premier enregistrement certifié du chant de l'Engoulevent doré *Caprimulgus eximius*, obtenu dans les collines rocheuses du Sahel malien. Le premier enregistrement certifié du chant roulé de l'Engoulevent doré *Caprimulgus eximius* a été obtenu près de Gao, dans le Sahel malien, en juin 2004. La repasse du chant a permis d'observer les chanteurs de près en fin de nuit et jusqu'à l'aube. Le chant est un ronronnement prolongé de 23 notes/s et apparaît quasi identique à celui de l'Engoulevent terne *C. inornatus* (enregistré au Yémen et au sud-est du Nigeria, d'où *C. eximius* est absent). Au Mali (Douentza à Gao) et ailleurs, *C. eximius* semble inféodé aux milieux rocheux ou rocailleux pour y chanter et nicher, mais peut se nourrir dans les plaines arides environnantes. *C. inornatus* est également associé aux milieux rocheux (du moins au sud et à l'est de la zone de sympatrie), ou aux prairies caillouteuses (parfois même en milieu montagneux). Il reste à étudier comment les deux espèces, au chant si semblable, se séparent écologiquement dans leur zone de sympatrie.

Summary. We obtained the first definite tape-recording of Golden Nightjar *Caprimulgus eximius* near Gao in the Sahel of Mali, in June 2004. Using playback, the singing birds were examined at close range, just before and until dawn. The song consists of a prolonged churr, of 23 notes/second, and appears virtually identical to that of Plain Nightjar *C. inornatus* (tape-recorded in Yemen and Nigeria outside the area of sympatry). In Mali (Douentza to Gao) and elsewhere *C. eximius* is clearly associated with rocky hills and stony tracts, whilst feeding can occur in the surrounding arid plains. Outside the area of sympatry, to the south and east of the range of *C. eximius*, *C. inornatus* is also associated with rocky hills, or at least pebbly grassland (sometimes in montane areas). It remains to be seen how these two similarly churring nightjars are segregated ecologically in the area of sympatry.

Jackson (2003) summarised our knowledge of the voice of the Golden Nightjar *Caprimulgus eximius*, stressing the lack of reliable tape-recordings. Since Rothschild & Wollaston (1902) it has been known that this species has a churring song: they collected 16 specimens in the Sudan and described the song as a 'churr', uttered on the ground for several minutes. Fry (1988) published a sonogram, attributed to *C. eximius*, of a song tape-recorded by S. Keith in Kenya, but as explained by Jackson (2003) there was a typographical error (an omission of some text) and the sonogram in question was in fact of Dusky Nightjar *C. fraenatus* (published in Chappuis 1981). *C. eximius* is indeed unknown in Kenya. Chappuis (1981) attributed a churring song he tape-recorded in Niger, 100 km north of Tillabéry, to *C. eximius*, but the bird was not captured nor observed in good light (C. Chappuis pers. comm.). Therefore, after FD-L obtained a recording of Plain Nightjar *C. inornatus* from the Mambilla Plateau in eastern Nigeria which proved to be identical to the Tillabéry recording, Chappuis (2000) changed his attribution of the Tillabéry bird to *C. inornatus*.

The Mambilla nightjar was tape-recorded at dusk, on 26 March 1988, singing from gravelly short grassland beside a large patch of montane rainforest at Leinde Fadali, at 1,680 m (*cf.* Dowsett-Lemaire 1989). The bird was not captured but was seen moderately well, showing a tail of normal length (thus excluding Long-tailed Nightjar *C. climacurus*) and a small white wing patch. The bird was attributed to *C. inornatus*, in part because of the habitat and southern location, which seemed to exclude *C. eximius*, which is virtually endemic to the Sahel. A few years later a very good recording of *C. inornatus* from Yemen was obtained by P. Davidson. The author of the song was not very well seen (P. Davidson *in litt.*),

but one *C. inornatus* was mist-netted in the same general area (Dymond (1996) and the song described as a prolonged churr. D. J. Pearson (*in litt.*), who heard *C. inornatus* in Ethiopia, also described the song as a churr, of moderate speed. The tape-recorded songs of *C. inornatus* from Mambilla and Yemen are virtually identical: the beats cover the same frequency range and are given at a rate of 22/second (Yemen) and 23/second (Nigeria) respectively. The Tillabéry bird (better referred to as *Caprimulgus* sp.) has a churr of the same pitch, and of 23 notes/second. *C. inornatus* is silent in eastern Africa, being a non-breeding migrant there (Chapin 1939, Zimmerman *et al.* 1996).

Two *C. fraenatus* tape-recorded in Kenya (published by Chappuis 1981 and Ranft & Cleere 1998) produce a faster churr, of 33 and 29 notes/second respectively. The recording published in 1981 is by Mrs Keith and was identified by M. E. W. North (Chappuis 1981, Jackson 2003), that published in 1998 is by D. J. Pearson, who has long field experience of East African nightjars. Trained ears can distinguish the churr of *C. inornatus* from the faster churr of *C. fraenatus* without great difficulty (D. J. Pearson *in litt.*, FD-L pers. obs.).

Tape-recording of *C. eximius* in Mali

In June 2004 we spent five days in the Sahel of Mali, between Douentza and Gao. One of our main objectives was to obtain a tape-recording of the song of *C. eximius*. Robertson (2001) had listed *C. eximius* for the Ag Oua-Ag Arbech Important Bird Area, which covers an area immediately east and north-east of Gao. P. Robertson (*in litt.*) informed us that he and two colleagues had found one bird day-roosting amongst rocks, in April 1989. This was the site of a former French fort, on a small rocky escarpment a few kilometres east of Gao; a Desert Eagle Owl *Bubo bubo ascalaphus* was discovered roosting on the same rock face.

Rocky hills are rare around Gao. We first searched for this habitat along the road to the north, towards Kidal, but failed to find any. When scanning the surroundings from atop a sand dune, we realised that the only likely area was some way to the south-east. Thus we took the road from Gao east towards Djébok, and *c.*6 km from Gao we were within a short distance of the escarpment and the ruins of the French fort. The escarpment is several hundred metres long but very low: the maximum height of the rock face near its centre is *c.*20 m. At both sides, the escarpment slopes down in the form of broken rocks of volcanic appearance (Fig. 2). On 16 June, we established camp at 16°16'N 00°03'E, *c.*50 m from the small cliff, adjacent to the only large tree in the area (a *Balanites aegyptiaca*); the sparse vegetation consisted mainly of scattered small bushes and the spiky grass *Schoenefeldia gracilis*. A sandstorm started at 17.00 hrs, and although that did not prevent a pair of *Bubo b. ascalaphus* from emerging onto the cliff and bravely facing the wind, everything else was sheltering. When we awoke next day, at 04.30 hrs, the wind had calmed to occasional bursts and we heard a churring song nearby. It appeared that two pairs of nightjar were present, with both males singing. The nearer male, which was tape-recorded, sang from atop nearby rocks and bushes, including the *Balanites* by our tent. It responded to playback on several occasions, flying over and around us while giving a double wing-clap. The large, broad white wing patch was clearly visible, as were the white tail-corners; both features were also obvious when the bird was perched. In addition to the churring song, a call-note was uttered a few times (not tape-recorded) consisting of 3–4 *koro, koro, koro*, given at the rate of three notes per second. All four nightjars were active until almost full daylight, when the mottled golden plumage became very obvious.

On the evening of 18 June we camped near Bota village, 5 km north of Douentza on the road to Tombouctou (15°05'N 02°58'W). Bota is at the foot of Mt Gandamia, a huge rocky mountain rising several hundred metres above the surrounding plain (Fig. 3). We briefly heard a churring nightjar at dusk, but playback of the Gao tape failed to interest it, and it flew towards the plain. Next day we were woken at 04.30 hrs by a churring song coming from broken rocks in the foothills. This time playback of the Gao tape attracted a nightjar within seconds and it flew around wing-clapping or churred from a rock close to the ground. We obtained good views of the bird, especially as it remained active until almost full daylight. Eventually it landed on the ground in front of a small golden rock 6 m away from us and apparent-

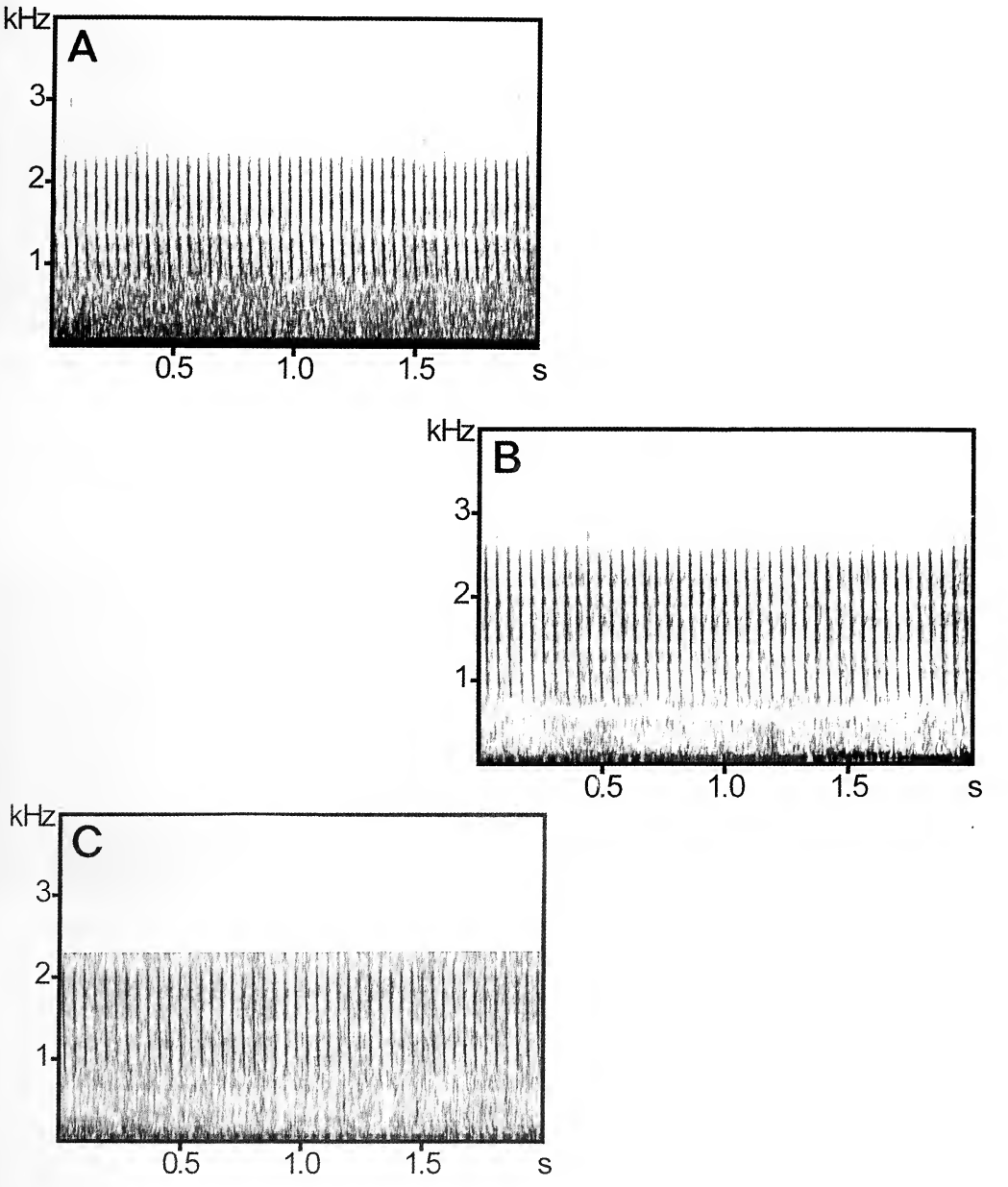

Figure 1. Sonograms of churring songs of nightjars: **A**: Golden Nightjar *Caprimulgus eximius* tape-recorded at Gao, Mali (original recording by FD-L on Panasonic RQ-L335 recorder with Hama microphone); **B**: Plain Nightjar *C. inornatus* tape-recorded in Yemen (by P. Davidson); **C**: presumed *C. inornatus* tape-recorded in south-east Nigeria (original recording by FD-L on Sony TCM-150 recorder, modified by Mineroff, with Beyer Dynamic microphone). Sonograms generated with Avisoft Professional programme.

Sonogrammes de chants roulés d'engoulevents: **A**: Engoulevent doré *Caprimulgus eximius* enregistré à Gao, Mali (enregistrement original par FD-L avec un enregistreur Panasonic RQ-L335 et un microphone Hama); **B**: Engoulevent terne *C. inornatus* enregistré au Yémen (par P. Davidson); **C**: *C. inornatus* présumé enregistré au sud-est du Nigeria (enregistrement original par FD-L avec un enregistreur Sony TCM-150, modifié par Mineroff, avec microphone Beyer Dynamic). Sonogrammes réalisés avec le programme Avisoft Professional.

ly fell asleep until full daylight. It was unquestionably *C. eximius*.

At Hombori, nearly halfway between Douentza and Gao, we had camped at the foot of another huge rocky mountain, the 'Main de Fatma' (15°14'N 01°48'W; Fig. 4), on 15–16 June, and heard brief snatches of a churring nightjar at dusk and dawn; we saw one bird flying off towards the surrounding plain at dusk. It could not be tape-recorded as it sang for too short a period, but we believe it too was *C. eximius*, as the habitat was identical to that at Bota and the location intermediate between Bota and Gao.

When we subsequently analysed the song on the Gao tape, we found that it had a tempo and frequency so similar to those of *C. inornatus* of Nigeria and Yemen (and to that of *Caprimulgus* sp. from Tillabéry, Niger) as to be indistinguishable. It had 23 beats per second, and was of similar pitch. Fig. 1 presents sonograms of the two species' songs. The songs share features of tempi, general frequency and shape of beats. It is possible that the song of *C. eximius* is a little louder at the level of 1 kHz, but more recordings would be necessary to test whether this is a permanent feature of the species' voice. Our recording of *C. inornatus* from Mambilla (south-east Nigeria) is only slightly lower pitched than that from Yemen.

Habitat of *C. eximius* in Mali

At the Gao and Douentza sites, *C. eximius* was found to be associated with rocky hills, whether low or very tall, although some birds were seen, at both sites and at Hombori, flying towards the surrounding plain to feed. The habitat could be described succinctly as a more arid version of the rocky places favoured by Freckled Nightjar *C. tristigma*. The latter was not found at any of the three rocky hills explored in June 2004, but, on a previous visit, on 2 March 2002, a *C. tristigma* was clearly heard at Gono, *c.*25 km east of Douentza (15°05'N 02°44'W), at the foot of a large amphitheatre which is part of the same rocky massif as Mt Gandamia, and stretches almost all the way to Boni (15°04'N 02°13'W). The cliff at Gono faces south, the 'cirque' is more sheltered and the vegetation somewhat more developed than at Bota, with more large *Acacia* (especially *A. albida*, whereas the dominant tree at Bota is *A. tortilis*). Birds associated with rocks at Gono included Fox Kestrel *Falco alopex*, Stone Partridge *Ptilopachus petrosus*, Rock Pigeon *Columba livia*, Barn Owl *Tyto alba*, Spotted Eagle Owl *Bubo africanus*, Rock Martin *Hirundo fuligula*, Cliff Chat *Myrmecocichla cinnamomeiventris*, Familiar Chat *Cercomela familiaris*, Neumann's Starling *Onychognathus neumanni* and House Bunting *Emberiza striolata*. Neither *Cercomela familiaris* nor *Onychognathus neumanni* (nor, as already mentioned, *C. tristigma*) were found at Bota, where the main cliff is more exposed as it faces

Figure 2. Low rocky escarpment near Gao, Mali, where Golden Nightjar *Caprimulgus eximius* was tape-recorded (Françoise Dowsett-Lemaire)

Escarpement rocheux de faible hauteur près de Gao, Mali, où l'Engoulevent doré *Caprimulgus eximius* a été enregistré (Françoise Dowsett-Lemaire)

Figure 3. Tall rocky mountain near Douentza, Mali; Golden Nightjars *Caprimulgus eximius* occupy the lower levels with broken rocks (Françoise Dowsett-Lemaire)

Haute montagne rocheuse près de Douentza, Mali; les Engoulevents dorés *Caprimulgus eximius* occupent les niveaux inférieurs (Françoise Dowsett-Lemaire)

west, and the area appears too sparsely vegetated for these birds. Other species associated with rocks or cliffs at Bota were, in addition to various raptors, mainly *Ptilopachus petrosus*, *Tyto alba*, *Bubo b. ascalaphus* (calling from the tall cliff), *B. africanus* (heard and seen among the broken rocks in the foothills), *Columba livia*, Mottled Swift *Apus aequatorialis*, Pallid Swift *A. pallidus*, *Hirundo fuligula*, *Myrmecocichla cinnamomeiventris*, and both *Emberiza striolata* and Cinnamon-breasted Rock Bunting *E. tahapisi*. At the 'Main de Fatma' at Hombori the vegetation is thinner and the main rock-associated bird species include *Ptilopachus petrosus*, *Columba livia*, *Tyto alba*, *Bubo b. ascalaphus*, *B. africanus* (also in the foothills, as at Bota), *Apus aequatorialis*, *A. pallidus*, *Hirundo fuligula*, *Myrmecocichla cinnamomeiventris*, *Emberiza striolata* and *E. tahapisi*.

Finally, the small rocky escarpment near Gao is in very much more arid country, and bird species recorded adjacent to the rocks were very few: no diurnal raptors nor *Ptilopachus petrosus*, no swifts nor martins, but only one pair of *Bubo b. ascalaphus*, one pair of *Tyto alba* (seen at dawn returning to a rock crack only metres away from that inhabited by the larger *Bubo*), a pair of Desert Larks *Ammomanes deserti* with young (among the broken rocks), one Blackstart *Cercomela melanura* and a few *Emberiza striolata*.

Discussion

That *C. eximius* may be associated with rocky hills and escarpments in the same way as *C. tristigma* is not clearly mentioned in the literature, but at least an association with stony ground is well established. Indeed, in an arid environment there may be little else but rocky hills or at least broken rocks to provide the necessary shelter for day-roosting and nesting. Rothschild & Wollaston (1902: 20–21) described the habitat in Sudan as 'generally sloping ..., coarse and gravelly, often with a good many scattered stones and tufts of grass'. The

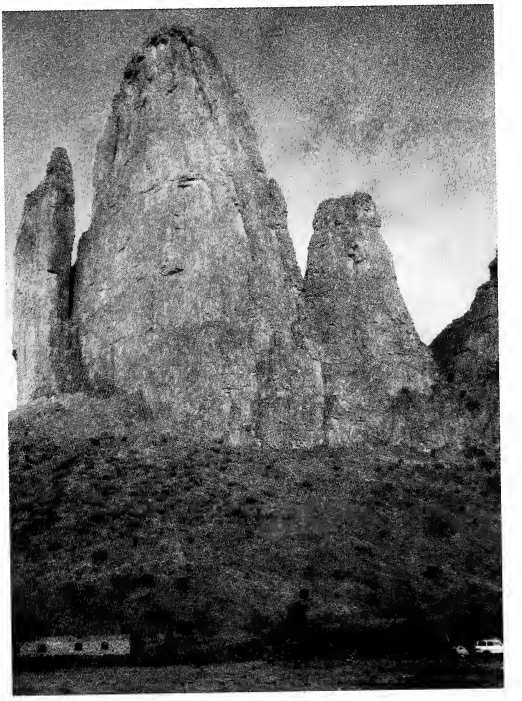

Figure 4. 'Main de Fatma', Hombori, Mali. A churring nightjar song, almost certainly belonging to Golden Nightjar *Caprimulgus eximius*, was heard here (Françoise Dowsett-Lemaire)

'Main de Fatma', Hombori, Mali, où un chant roulé a été entendu, presque certainement celui de l'Engoulevent doré *Caprimulgus eximius* (Françoise Dowsett-Lemaire)

main habitat description in Fry & Harwin (1988: 183) is evidently based on the same reference: 'typically on sloping, coarse gravelly and stony ground with scattered tufts of grass and dwarf scrub'. Even though Rothschild & Wollaston (1902) never saw *C. eximius* perched on a tree (a detail repeated by Fry & Harwin 1988), we can vouch that this does indeed occur: the bird tape-recorded near Gao frequently perched in trees while singing, as well as on rocks. Few other data on habitat have been published, *C. eximius* having remained one of the least-studied African nightjars. Lynes (1925: 370), however, added a few details of interest in his notes from the Sudan: 'We found this lovely nightjar here and there ... on yellow to reddish-yellow gravelly or stony tracts ... Along our route across the flat plains such ground is more or less confined to isolated patches'.

On the basis of these publications and our observations in Mali we conclude that the species is associated with stones and rocks, including broken rocks on small escarpments or situated in the foothills of large mountains.

The similarity between the songs of *C. eximius* and *C. inornatus* is a problem. Normally, churring nightjars that are largely sympatric chur at different speeds: see for example *C. inornatus* and *C. fraenatus*. The latter produces a chur that is 30–50% faster than that of its congener, with 29–33 notes/second versus 22–23, and there is no doubt that birds, which have a better appreciation of time-resolution than humans, can make the distinction. Another striking example is that of *C. climacurus*, which produces the fastest of all African nightjars' churrs, at 42 beats/second (measured on a sonogram made from the recording published by Chappuis 1981). This is so fast as to sound almost like a purr.

C. eximius is near-endemic to the Sahel and unknown east of Sudan (Fry & Harwin 1988). The range of *C. inornatus* extends further south and south-east (mainly as a non-breeding migrant; e.g. Chapin 1939, Zimmerman *et al.* 1996), and east to Yemen, but the two species overlap in a large part of the Sahel. *C. inornatus* appears to occupy a very broad range of habitats, from very dry to reasonably green, having even been found breeding in montane grassland on Mt Nimba, Liberia (based on a nestling collected by A. D. Forbes-Watson, in Colston & Curry-Lindahl 1986, Fry & Harwin 1988); this appears rather similar to the habitat where FD-L tape-recorded it on the Mambilla Plateau. In Bui National Park in western Ghana in March 2005, some (presumed) *C. inornatus* were singing in two places in recently burnt woodland with pebbly or rocky substrate (pers. obs.). In the more rocky of the two sites there were also several *C. tristigma*. The churring song sounded similar to that taped in Nigeria and Yemen, i.e. clearly slower than that of sympatric *C. climacurus*, and one *C. inornatus* was seen very well by day in the same area. In Faro National Park in Cameroon one presumed *C. inornatus* (i.e. with a similar slowish churr) was heard on a stony hill next to *C. tristigma* (pers. obs. March 1999). It was not seen but this was in Sudanian woodland way south of the range of *C. eximius*.

Possibly *C. inornatus* is ecologically well segregated from *C. eximius* within the Sahel, but that remains to be proven. Any ornithologist coming across a churring nightjar in West Africa should be equipped with at least a copy of a tape-recording (of either *C. eximius*, *C. inornatus* or *Caprimulgus* sp. from Tillabéry in Chappuis 2000, all similar), and play it in the early morning to discover which species reacts. From our experience in Mali, and even more so in the forests of northern Congo (where we undertook extensive playback experiments with Brown Nightjar *C. binotatus* and suspected Itombwe Nightjar *C. prigoginei*: Dowsett-Lemaire & Dowsett 1998), nightjars respond far better in the hour just preceding dawn than in the early part of the night. They then return to their territory on a full stomach and are ready to challenge a competitor. Moreover, good views of the singer can be obtained as dawn approaches.

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Notes on the breeding biology of Plain Swift *Apus unicolor* on Gran Canaria, Canary Islands

Eduardo García-del-Rey

Notes sur la biologie de reproduction du Martinet unicolore *Apus unicolor* à Gran Canaria, Îles Canaries. La biologie de reproduction du Martinet unicolore *Apus unicolor* a été étudiée de façon quantitative à Gran Canaria. En moyenne, la première ponte est déposée le 21 avril et la seconde le 24 juin (une troisième ponte a également été notée), prolongeant la période de nidification suspectée auparavant d'environ 1,5 mois. Les tailles moyennes des premières et deuxièmes pontes sont très semblables (1,97 œufs ±0.06 vs. 1,95 œufs). Le pourcentage des deuxièmes pontes est de 70% et la réussite moyenne des premières et deuxièmes pontes de 74,44±6,77 et 64,29±5,05 respectivement. Ces caractéristiques reflètent la position géographique et l'aspect océanique des Îles Canaries par rapport à la région tempérée septentrionale et l'Afrique tropicale.

Summary. The breeding biology of Plain Swift *Apus unicolor* was quantitatively studied on Gran Canaria. Mean laying date of the first clutch was 21 April and that for the second clutch 24 June (a third clutch was also recorded), extending the previously suspected breeding period by *c.*1.5 months. The mean sizes of the first and second clutches were very similar (1.97 eggs ±0.06 vs. 1.95 eggs). The percentage of second broods was 70% and the mean breeding success of first and second broods was 74.44±6.77 and 64.29±5.05 respectively. These intermediate life-history traits reflect the geographical location and oceanic aspect of the Canaries compared to the northern temperate region and tropical Africa.

Although Plain Swift *Apus unicolor* breeds regularly in the Canary Islands, its reproductive biology has never been documented quantitatively (García del Rey 2001, Martín & Lorenzo 2001). As the Canaries lie midway between the tropics and the temperate zone, it might be expected that Plain Swifts show life-history traits intermediate between those of swifts of the northern temperate region and those of tropical Africa. The abundance of insect life is thought to have a significant impact on the breeding biology of swifts, and may explain why breeding coincides with the wet season in the tropics and summer in the temperate zone (Chantler 1999). Weather, temperature, sunshine, wind velocity and precipitation all influence feeding conditions and prey abundance, hence affecting the breeding biology of many swifts (Lack 1973, Chantler 1999). The avian breeding season on the Canaries has been variably stated to extend from March to August (Bannerman 1963, Bannerman & Bannerman 1965, Cramp 1985, Chantler 1999) or April–September (Martín & Lorenzo 2001). I present here information on some aspects of the breeding biology of Plain Swift, in particular laying dates, clutch size, number of clutches and breeding success.

Figure 1. Study site at Puente Silva, Gran Canaria (Eduardo Garcia-del-Rey)

Site de l'étude à Puente Silva, Gran Canaria (Eduardo Garcia-del-Rey)

Methods

This study was undertaken during 2003 on Gran Canaria, Canary Islands (28°00'N 15°30'W). The climate on this oceanic archipelago is Mediterranean with cool, wet winters and hot, dry summers, and is influenced by the local north-east trade winds, the proximity of the Sahara on the

African continent and the high altitude of the central and westerly islands (Marzol-Jaén 1984). The study site was Puente Silva (Fig. 1.), a 400-m-long bridge with an internal cavity 2 m high and 10 m wide, near Agaete, in the north-west of the island. Swifts could access the interior of the bridge through narrow tubes and nested on the concrete floor, which was very convenient for nest inspection. Data were collected once a month from April to September during afternoon visits. The following assumptions were made in order to reconstruct the breeding phenology:

- Mean incubation period (measured from the laying to the hatching of the last egg) was assumed to be 20 days. Most swift species incubate for this length of time and incubation starts when the clutch is complete (Lack 1973).
- Laying was assumed to occur at an interval of two days (Lack 1973).
- Minimum nestling period was assumed to be 37 days (Cramp 1985). Nestling swifts are known to be able to slow down their growth in bad weather when food is scarce, thus saving energy for vital functions but thereby prolonging the nestling period considerably. Hence the nestling period can vary by up to three weeks (Lack 1973). It is assumed that the weight curve for a young swift does not vary greatly with season in the stable weather of Gran Canaria (see Marzol-Jaén 1984 for details of climate).

All eggs found were touched to check if incubation had started. Nests in which eggs were laid but not incubated were excluded from the study. In order to estimate the age of the nestlings, each chick was assigned to one of four categories: 1 = 1–7 days old (pink/naked chick); 2 = 8–15 days old (dark chick with very tiny or no pin feathers on wings); 3 = 16–30 days old (dark chick with pin feathers with brush-tipped feathers of several sizes); 4 = 31–37 or more days old (full-feathered chick with short to long tail ready to fledge). The assignment to categories was aided with photographs taken during the course of the study (Figs. 2–5). When a brood with chicks of different sizes was found, the age category assigned was based on the largest chick. Once the age of a nestling was estimated, the date on which the first egg in the clutch was laid was extrapolated.

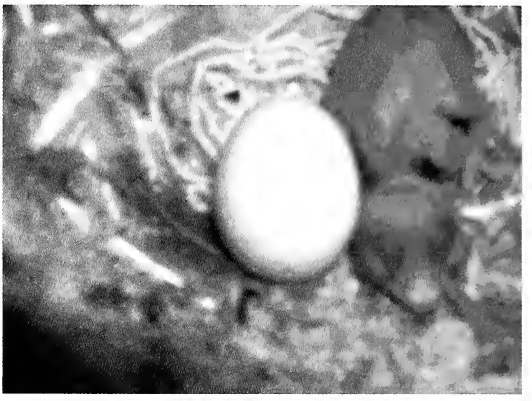

Figure 2. Nestling of category 1 = 1–7 days old, naked and pink (Eduardo Garcia-del-Rey)

Oisillon de la catégorie 1 = agé de 1–7 jours, nu et rose (Eduardo Garcia-del-Rey)

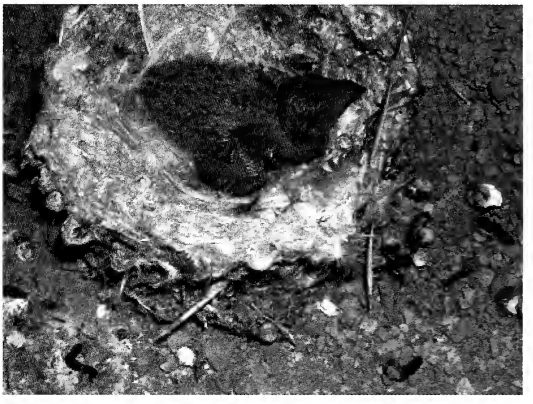

Figure 3. Nestling of category 2 = 8–15 days old, dark with very tiny or no pin feathers on wings (Eduardo Garcia-del-Rey)

Oisillon de la catégorie 2 = agé de 8–15 jours, foncé avec de très petites plumes ou sans plumes aux ailes (Eduardo Garcia-del-Rey)

For each nest the following parameters were determined: laying date (date of first egg), clutch size, breeding success, and occurrence of a second clutch (laid in same nest from which a first brood had fledged successfully). The percentage of second clutches was also calculated. As no birds were ringed, it has been assumed that all second (and third) clutches were laid in the same nest as the first. All statistical analyses were performed using SPSS 11.0 and results presented as mean ± standard error.

Figure 4. Nestling of category 3 = 16–30 days old, dark with brush-tipped feathers of several sizes (Eduardo Garcia-del-Rey)

Oisillon de la catégorie 3 = agé de 16–30 jours, foncé avec des plumes de plusieurs tailles (Eduardo Garcia-del-Rey)

Figure 5. Nestling of category 4 = 31–37 or more days old, fully feathered with short to long tail, ready to fledge (Eduardo Garcia-del-Rey)

Oisillon de la catégorie 4 = agé de 31–37 jours ou plus, ayant toutes ses plumes avec queue courte ou longue, prét à quitter le nid (Eduardo Garcia-del-Rey)

Results

The mean laying date of first clutches was 21 April (51.57±5.22; 1=1 March) and that for second clutches 24 June (115.91±4.32). One pair laid a third clutch on 21 July (see Table 1). Four pairs laid their first egg on the inspection day or the day before (assuming a laying interval of two days). This allowed checking the assumptions 1 and 3 (see Methods), and both were found to be correct.

The mean sizes of first and second clutches were very similar (1.97±0.06 for first clutches and 1.95±0.05 for second clutches) (Table 1), and no statistically significant differences were found between these (Student t-test: t=0.18, df=49, $P>0.05$). The number of second clutches was 70%.

Table 1. Mean laying date (1=1 March), average clutch size and mean breeding success (±SE) of first, second and third clutches/broods. Sample size in parentheses.

Tableau 1. Date moyenne de ponte (1=1 mars), taille moyenne des pontes et réussite moyenne (±SE) des premières, deuxièmes et troisièmes pontes / nichées. Taille de l'échantillon entre parenthèses.

	First clutches/broods (*n*=30)	Second clutches/broods (*n*=21–22)	Third clutches/broods (*n*=1)
Laying date	21 April	24 June (*n*=22)	21 July
	51.57±5.22	115.91±4.32	143
Clutch size	1.97±0.06	1.95±0.05 (*n*=21)	1
Breeding success %	74.44±6.77	64.29±5.05 (*n*=21)	100

Of the 30 pairs that laid a first clutch, the majority (19 pairs) raised all young (i.e. 100% breeding success), six pairs lost half the chicks (50% breeding success), one pair had a 33.3% breeding success and four pairs did not produce any offspring. Thus, mean breeding success of first broods was 74.44±6.77 (Table 1). Of the 21 pairs laying a second clutch, only six raised all young, whereas the majority (15 pairs) raised 50% of the chicks. The mean breeding success for second broods dropped to 64.29±5.05 but was not statistically significant (Mann-Whitney U-test: U=235.5, $P>0.05$). The causes of failure in the first half of the breeding season are unknown.

Discussion

The present study suggests that the breeding season of the Plain Swift in Gran Canaria commences in early March and ends in mid September, extending the previously suspected breeding period by *c.*1.5 months. However, mean laying dates presented here (Table 1) should be viewed with caution, as the precise date on which each pair in the colony laid their first egg is unknown. Any variation at the different stages of breeding will also affect the laying date, and *Apus* are known to have variable incubation and nestling periods

(Lack 1973). Daily visits to the colony during several years are needed to improve the data presented here (i.e. to establish the precise laying date and incubation and nestling periods of each nest, and to confirm the two-day laying interval). Most of the second clutches were laid immediately after the fledging of first clutches (i.e. *c.*1 day later). The nestling period of first broods could therefore not exceed *c.*37 days, which facilitated more accurate estimation of the laying date of the second clutch's first egg. Only three broods of second clutches had nestling periods longer than 37 days (45, 48 and 49 days, respectively). However, as the mean incubation period (20 days) and the minimum nestling period (37 days) were used to calculate the mean laying date in the colony, the extension of the breeding phenology found is this study is justified.

My results on clutch size (first clutch size = 1.97±0.06 eggs) agree with those of other authors (e.g. Cramp 1985, Chantler 1999), who also suggested that double broods (70% in this study) are frequent in Plain Swift. Clutch size in the genus *Apus* varies between one to three eggs (Lack 1973). Mean clutch for Common Swift *Apus apus* in northern Africa (Cramp 1985) is the same as that of Plain Swift in Gran Canaria. However, breeding success of first clutches in Plain Swift is higher than the mean reported for Common Swift (74.4% vs. 58–65%) (Chantler 1999). Life-history traits associated with breeding are assumed to be determined by natural selection to maximise the production of offspring (Baker 1938, Lack 1954). The pioneering work of Lack (1973) pointed out the highly adaptable breeding seasons in swifts. For example, Common Swift raises only one brood per year at Oxford, England, whereas Pallid Swift raises two successive broods in the Mediterranean region, and the Afrotropical White-rumped Swift *A. caffer* raises three broods each year (Lack 1973). The length of the warm-weather period has been suggested by Lack (1973) to explain this difference. Plain Swift in Gran Canaria seems to have adapted to the stable weather on the island, resulting in a high number of second clutches (occasionally even a third), low chick mortality and high breeding success. Both clutch size and number of breeding attempts per season seem to reflect the geographical location and oceanic aspect of these islands: clutch size is indeed lower than in the northern temperate region, whilst the number of breeding attempts is higher than in the north but lower than in Africa.

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Some factors affecting foraging and habitat of Ring Ouzels *Turdus torquatus* wintering in the Atlas Mountains of Morocco

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Quelques facteurs affectant la recherche de nourriture et l'habitat du Merle à plastron *Turdus torquatus* hivernant dans l'Atlas marocain. L'étude présentée avait pour objet d'examiner le rôle des baies de genévrier comme source principale de nourriture des Merles à plastron *Turdus torquatus* hivernant dans l'Atlas marocain. Des deux espèces de genévrier examinées, l'Oxycèdre *Juniperus oxycedrus* est la plus répandue, mais se trouve en faible densité dans d'autres milieux boisés. Dans les 43 sites étudiés dans le Moyen et Haut-Atlas, les Merles à plastron ont été observés uniquement à l'intérieur ou près des bois de Genévrier de Phénicie *J. phoenicea*. Malgré le fait que le nombre de baies de genévrier mûres dans de tels bois varie beaucoup (de $2{,}7 \times 10^4$ à $2{,}6 \times 10^6$ par ha), il apparaît que le niveau des dégâts causés aux arbres par des coupes, et le niveau général de perturbation, sont des facteurs plus déterminants plus importants pour la présence des Merles à plastron que le nombre de baies. Les bois de genévriers rencontrés pendant cette étude sont dégradés et vieillissants, et il n'y a pas de régénération, ce qui suggère un déclin à long terme avec des implications potentielles pour la future disponibilité de genévriers et la survie des Merles à plastron.

Summary. This study aimed to shed light on the role of juniper berries as the principal food source for Ring Ouzels *Turdus torquatus* wintering in Morocco's Atlas Mountains. Of the two juniper species surveyed, Prickly Juniper *Juniperus oxycedrus* was the most widespread, but occurred at low densities in other types of woodland. Of 43 sites surveyed in the Middle and High Atlas, Ring Ouzels were only seen in or close to Phoenician Juniper *J. phoenicea* woodland. Although the number of ripe juniper berries in such woodland ranged from 2.7×10^4 to 2.6×10^6 per ha, the degree of damage to the trees from cutting, indicative of general levels of disturbance, appeared to be a stronger determinant of Ring Ouzel presence than did the number of berries. Juniper woodland encountered in this study was in a degraded and ageing state with no recruitment by younger trees, suggesting a long-term decline with potential implications for juniper availability and Ring Ouzel survival in the future.

Ring Ouzel *Turdus torquatus* breeds in upland areas of Europe and Fennoscandia, and winters around the Mediterranean, North Africa and the Middle East (Snow & Perrins 1998). Nominate *T. t. torquatus*, which breeds in Britain and Fennoscandia, winters in southern Spain and north-west Africa, predominantly in the Atlas mountains, from Morocco to Tunisia (Wernham *et al.* 2002).

Although populations in continental Europe (*T. t. alpestris*) appear largely stable, there has been a decrease in numbers and a contraction of range in Spain and Britain (Heath *et al.* 2000, Wotton *et al.* 2002) and the species is now included on the UK Red List (Gregory *et al.* 2002). The decline has been attributed to a range of factors including habitat change, disturbance, global climate change, predation, pollution, increased competition from Blackbirds *T. merula*, and problems on the migration routes or wintering grounds (Tyler & Green 1994, Murray *et al.* 1998, Stott *et al.* 2002), but the exact reason remains unclear (Burfield 2002). Burfield (2002) suggested that as UK birds appear to share wintering grounds with birds from stable continental populations, factors causing this decline are most likely to be acting in the breeding grounds or migration routes. Nevertheless, the ecology of Ring Ouzels during the 5–6 months when they are migrating and wintering outside their breeding area is poorly understood.

The species' winter food requirements are not well understood, although they have been reported mainly eating juniper berries in Morocco and Algeria (Heim de Balsac 1931, Heim de Balsac & Mayaud 1962, Arthur *et al.* 2000). In the Sierra

Nevada of Spain, Zamora (1990) found juniper berries, supplemented by arthropods, to constitute the Ring Ouzel's main diet in winter. Zamora also suggested that this restricted diet reflected the limited choice of food in this area, as Ring Ouzels wintering elsewhere in Spain ate other berry species where available.

Four species of juniper occur in Morocco: Prickly Juniper *Juniperus oxycedrus*, Phoenician Juniper *J. phoenicea*, Spanish Juniper *J. thurifera* and Common Juniper *J. communis*. The first three are common at moderate to high altitudes in Morocco, but Common Juniper is rare, growing only on high mountains (Jahandiez & Maire 1931).

In Morocco, Ring Ouzels are common to locally abundant winter visitors, especially in the Central and Eastern High Atlas (Thévenot *et al.* 2003). They are rare and irregular in the western Middle Atlas, but more regular in the eastern part. Thévenot *et al.* (2003) state that they occur in open coniferous woodland on stone slopes from 1,000 m to 2,700 m, especially among *J. phoenicea and J. thurifera* at 1,800–2,200 m or in mixed *J. oxycedrus* / *Quercus ilex* woodland, often near rivers or waterholes.

The present study of Ring Ouzels overwintering in the Atlas Mountains focused primarily on their relationship with juniper and factors which may influence the availability of juniper berries, and hence the survival of Ring Ouzels in winter.

Methods

During two visits to Morocco in the winters of 1993 and 2000, a total of 43 sites was examined along two transects through the Middle and High Atlas, respectively, plus an additional site (3.1) in the central High Atlas (Fig. 1). Sites representative of a range of habitats were assessed for the presence of Ring Ouzel, juniper and other berry-bearing species, potential food for Ring Ouzels, as they were encountered along the transects. Food availability and pressures on food sources were evaluated.

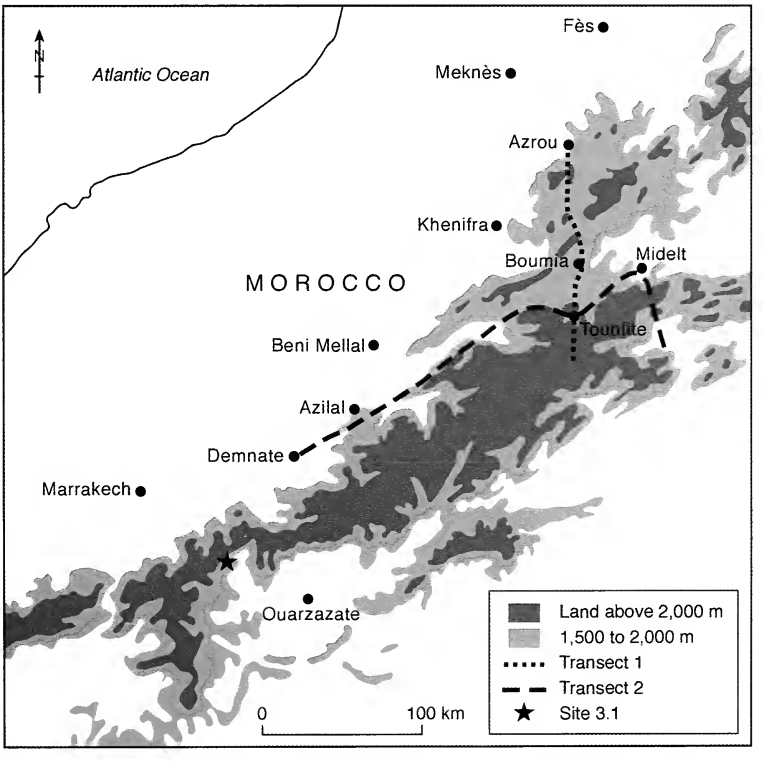


Figure 1. Map of the Middle Atlas and High Atlas Mountains of Morocco showing the positions of Transects 1 and 2 and Site 3.1.

Carte du Moyen et Haut-Atlas marocain, indicant la localisation des Transects 1 et 2 et du Site 3.1.

Transects
Transect 1 ran *c.*110 km, north to south from Azrou, across the Middle Atlas, to Tounfite and Midelt on the north-east slopes of the High Atlas (Fig. 1). The preliminary visit, in December 1993, aimed to locate Ring Ouzels and potential berry sources, focusing on juniper. Qualitative observations were made at nine sites (1.1–1.9). Juniper-rich sites were located with the aid of information from Eaux et Forêts (Moroccan Water and Forestry Department) and from Berber farmers and shepherds.

Transect 2, in January 2000, ran primarily east to northeast along the northern slopes of the High Atlas from Demnate in the west to Midelt, *c.*230 km to the east, and crossed Transect 1 at Tounfite; so sites 1.7 and 2.19 are the same. On the second transect, 33 locations (2.1–2.33) representing a series of distinct habitats, at least 1 ha in extent, ranging from ploughed arable land to forest, were assessed as they were encountered. However, greater emphasis was given to areas containing juniper and other berry-bearing species as these were likely to be more important to Ring Ouzels. An additional juniper-rich site (3.1) *c.*20 km south of Taddert was surveyed (Appendix 3).

Ring Ouzel density
At locations where Ring Ouzels were observed, on Transect 2 and site 3.1, they were counted along one 100 × 50 m transect through each site. Surveys were carried out in the morning only, between 09.00 and 12.00 hrs. Presence or absence of other *Turdus* spp. and their scats on and around juniper trees was noted.

Juniper tree parameters
Quantitative data on juniper trees were collected in Transects 2 and site 3.1, i.e. canopy diameter, tree height, number of trees per ha in 10 ˜ 10 m^2 quadrats chosen at random (see Table 2 and Appendix 3). The degree of cutting damage to trees was scored on a scale of 0–5 (0 = no visible damage; 5 = only stump remaining). Stands of juniper were classified as 'undegraded' if the mean scored was <2.5 and 'degraded' if they scored >2.6. At some sites (sites 2.1–2.19, 2.29 and 3.1) the number of juniper stumps per ha was counted and at Tounfite the diameter of juniper trunks at 0.25 m above ground was also recorded.

Juniper berry parameters
Ripe and unripe berries were counted per 0.25 m^2 of tree canopy surface on the north, south, east, west aspects and at the top of ten randomly selected Phoenician and Prickly Juniper trees at selected sites. The number of ripe and unripe juniper berries per ha was extrapolated by calculating the surface area of juniper trees. The proportion of aborted or insect-parasitised berries was calculated at several sites and the berry diameter of Phoenician Juniper and Prickly Juniper berries was measured with a micrometer.

Casual observations and coordinates
Signs of pressures on juniper tree density, survival and hence habitat quality were noted, as well as other factors that might effect survival of Ring Ouzels, e.g. habitat degradation, disturbance and proximity of sites to water. Other berry-bearing species were recorded along with topography, altitude and compass orientation of escarpments. For Transect 1 bearings or altitude were approximated using maps, but for Transects 2 and site 3.1, a Magellan GPS 2000XL global positioning system was employed.

Results
In total, 43 sites were investigated in the two phases of this study over an altitude range of 1,003–2,208 m (Appendices 1–2), and 11 distinct habitat types were discerned (Table 1).

Occurrence of juniper
Three species of juniper were encountered: Prickly, Phoenician and Spanish Juniper. Prickly Juniper formed bushes or small trees averaging 2.8 m in height and, being recorded at 21 of the 43 sites at 1,231–2,208 m, was the most widespread species. It grew mainly as a secondary species in stands of Phoenician Juniper as 5–20% (mean 9%) of the trees present or in Holm Oak *Quercus ilex* woodland as 5–50% (mean 21%). At two sites (1.9 and 2.2), Prickly Juniper was the dominant tree species.

Phoenician Juniper woodland was encountered mostly at the eastern end of the High Atlas, around Tounfite and south of Midelt, but also in the Central High Atlas, south of Marrakech at 1,918 m (3.1), at 1,003 m near Demnate (2.1) and in lower numbers in the Middle Atlas at 1,800 and 2,000 m (1.4 and 1.6). It grew as rounded

Table 1. Occurrence of Ring Ouzels *Turdus torquatus* and other thrushes *Turdus* spp. in 11 different habitats surveyed in 1993 and 2001, and the presence of berry bearing species.

Tableau 1. Présence du Merle à plastron *Turdus torquatus* et d'autres grives *Turdus* spp. dans 11 habitats différents examinés en 1993 et 2001, et la présence d'espèces produisant des baies.

Vegetation type and condition*	Berry-bearing species present**	Number of sites surveyed	Number of sites with Ring Ouzels	Other thrushes present
Holm Oak woodland	Prickly Juniper *J. oxycedrus*	7	0	Blackbird *T. merula*
Undegraded Phoenician Juniper woodland	Phoenician Juniper *J. phoenicea* Prickly Juniper *J. oxycedrus* (Spanish Juniper *J. thurifera*) (Hawthorn *Crataegus monogyna*) (Mistletoe *Viscum cruciatum*) (Dog Rose *Rosa canina*)	7	6	Blackbird *T. merula* Mistle Thrush *T. viscivorus* Song Thrush *T. philomelos* Redwing *T. iliacus*
Degraded Phoenician Juniper woodland	Phoenician Juniper *J. phoenicea* Prickly Juniper *J. oxycedrus* (Hawthorn *C. monogyna*)	5	0	Blackbird *T. merula* Mistle Thrush *T. viscivorus* Redwing *T. iliacus*
Undegraded/degraded Prickly Juniper woodland	Prickly Juniper *J. oxycedrus* (Lentisc *Pistacia lentiscus*)	2	0	Blackbird *T. merula* Mistle Thrush *T. viscivorus* Redwing *T. iliacus*
Degraded Spanish Juniper woodland	Spanish Juniper *J. thurifera* (Prickly Juniper *J. oxycedrus*)	1	0	None
Scrub woodland	Hawthorn *C. monogyna* Mistletoe *V. cruciatum* Dog Rose *Rosa canina* (Prickly Juniper *J. oxycedrus*)	6	1	Blackbird *T. merula* Mistle Thrush *T. viscivorus* Song Thrush *T. philomelos* Redwing *T. iliacus*
Cedar woodland	None	5	0	Blackbird *T. merula*
Plantation—pine or olive	None	3	0	None
Low herb and tussock grassland	None	2	0	None
Arable land	None	4	0	None
Bare stony ground	None	1	0	None

* Condition of vegetation: Undegraded = mean score for tree damage of 0–2.5; Degraded = mean score for tree damage of 2.6–5.0
**Scarce species in parentheses

conical trees on bare stony ground, averaging 3.5 m in height, at 1,780–1,928 m at 15 of the 43 sites studied, at densities of 7.6–84 trees per ha and was invariably the dominant species. At Tounfite, some individuals reached >8 m with trunk diameters up to 0.6 m (Fig. 2). Table 2 presents parameters for juniper trees at seven sites containing Phoenician Juniper, and further details are provided in Appendix 3.

Spanish Juniper, albeit severely degraded by cutting, was encountered at Inifif (1.5), near Col du Zad, in the Middle Atlas. In the High Atlas, it was found as an occasional secondary species to Phoenician Juniper at sites 2.19 and 3.1 at altitudes of *c.*1,920 m (Appendices 1–2). The trees were all *c.*3 m in height.

Condition of juniper trees

All juniper-rich sites had damaged trees, ranging in severity from removal of a few lateral branches to total destruction leaving splintered stumps (Figs. 3–4). On a scale of 0–5, all Phoenician Juniper sites contained damaged trees with nearly half rated at above 3 (moderate damage to only stump remaining) (Table 2). The situation was similar for Holm Oak and Prickly Juniper (Appendix 2). Local people with donkeys carrying bundles of juniper wood were frequently encountered. Fig. 5d shows that damage to Phoenician Juniper correlated positively with the number of juniper stumps present (r = 0.788) and negatively with presence of Ring Ouzels (Fig 5b: r = -0.733), but not with number of ripe berries (Fig 5a: r = -0.300) or altitude (Fig 5f: r = 0.047).

Figure 2. Large Phoenician Juniper *Juniperus phoenicea* tree of *c.*8 m in near-perfect condition, near Tounfite (Site 2.19) in the eastern High Atlas, Morocco. Denuded ground from overgrazing can be seen (Colin Ryall)

Grand Genévrier de Phénicie *Juniperus phoenicea* d'environ 8 m en état quasi parfait, près de Tounfite (Site 2.19) dans le Haut-Atlas marocain oriental. On peut voir le sol dénudé par le surpâturage (Colin Ryall)

Figure 3. Large juniper tree in advanced stage of progressive destruction from firewood collection near Aguelmame de Sidi Ali (Site 1.4) in the Middle Atlas, Morocco (Colin Ryall)

Grand genévrier en état avancé de destruction progressive par la coupe de bois de chauffe, près d'Aguelmame de Sidi Ali (Site 1.4) dans le Moyen Atlas marocain (Colin Ryall)

Stumps of younger trees usually showed resprouting from the base but this was absent in older stumps.

All juniper woodland was heavily grazed by sheep and browsed by goats, with the ground totally denuded of vegetation (Fig. 3) and with copious animal droppings. No juniper seedlings or young trees were found. It was common to encounter juniper woodland in the process of being cleared for agriculture, e.g. at Demnate and

Figure 4. Stump of a large juniper destroyed from firewood collection near Tounfite (Site 2.16) in the eastern High Atlas, Morocco (Colin Ryall)

Souche d'un grand genévrier détruit par la coupe de bois de chauffe, près deTounfite (Site 2.16) dans le Haut-Atlas marocain oriental (Colin Ryall)

Tounfite, and even lone junipers in ploughed fields, e.g. west of Boumia and south of Azrou.

Juniper berries

The number of berries on juniper and the ratio of ripe to unripe were very erratic, between sites and between trees at each site (Table 2). Mean ripe berry densities for Phoenician Juniper trees ranged from 191–1,309 per m^2 of canopy and in Prickly Juniper from 0–239 per m^2, with many trees devoid of berries. Where present Phoenician Juniper always contributed the majority of berries. The number of ripe berries in stands of Phoenician Juniper ranged from 2.7×10^4–1.2×10^5 per ha (mean = 0.7×10^5) for degraded sites and 1.1×10^5–2.6×10^6 per ha (mean = 0.9×10^6) for undegraded sites (Table 2). The mean ripe berry crop for all juniper species at all sites was 6.9×10^5 per ha.

At most sites, some juniper berries were aborted (shrivelled and lacking pulp) or parasitised by insects (a small exit hole, or white scale and lacking pulp). At site 2.2, Prickly Juniper dominated, 9.3% of berries were aborted or parasitised, for Phoenician Juniper it was 18% at site 2.16, 6% at 2.17, 0.35% at 2.18 and 0.2% at 2.19 (overall mean = 6.1%). The mean berry diameters for ten trees at site 2.15 were 10.2 mm for Prickly Juniper and 10 mm for Phoenician Juniper and in both species, ripe berries were red-brown and sweet when ripe.

Table 2. Juniper tree parameters and fruit crop at seven Phoenician Juniper *Juniperus phoenicea* rich sites on Transect 2 and site 3.1, and occurrence of Ring Ouzels *Turdus torquatus*

Tableau 2. Paramètres des genévriers et production de baies dans sept localités riches en Genévrier de Phénicie *Juniperus phoenicea* le long du Transect 2 et au Site 3.1, et présence de Merles à plastron *Turdus torquatus*

Site No.	Tree spp. present*	Mean canopy diameter (m) (*SE*)	Mean number of each Juniper sp. per ha (*SE*)	Mean tree condition rating (0-5)**	Juniper stumps per ha (*SE*)	Mean berry count /m² canopy (*SE*)		Berries per ha		Ring Ouzels per 100 ˜ 50 m transect (*SE*)
						ripe	unripe	ripe	unripe	
2.15	*J p*	3.75 *(0.34)*	33.9 *(4.3)*	1.5	0	436 *(106)*	712 *(180)*	3.3×10^5	5.3×10^5	14 *(4.04)*
	J o *(0.30)*	2.17 (0.52)	1.5	2		0	0	0	0	
2.16	*J p*	3.14 *(0.22)*	7.6 *(0.76)*	3.5	9.2 *(0.55)*	1033 *(189)*	158 *(63)*	1.2×10^5	1.9×10^4	0
	J o	2.08 *(0.24)*	2.2 *(0.73)*	3.5		0	0	0	0	
2.17	*J p*	3.39 *(0.30)*	18.4 *(1.9)*	2.4	7 *(1.8)*	448 *(137)*	68 *(14)*	1.5×10^5	2.2×10^4	1 *(0.70)*
	J o	2.4 *(0.86)*	12.8 *(4.2)*	3.7		239 *(276)*	0	2.8×10^4	0	
2.18	*J p*	3.82 *(0.43)*	83.6 *(10.8)*	2.5	11.9 *(3.17)*	759 *(168)*	58 *(23)*	1.5×10^6	1.5×10^5	3.4 *(0.45)*
	J o	2.64 *(0.31)*	3.6 *(3.5)*	3		0	0	0	0	
2.19	*J p*	5.62 *(0.37)*	40 *(2.23)*	2	5.2 *(1.82)*	1309 *(224)*	92 *(80)*	2.6×10^6	1.8×10^5	7.8 *(3.45)*
	J o	2.9 *(0.78)*	16 *(4.66)*	2		0	0.8 *(0.9)*	0	0	
	J t	3.15 *(0.10)*	0.4 *(0.45)*	1		-		-	-	
2.29	*J p* *(0.55)*	2.12 *(3.16)*	20	4	30.8 *(5.13)*	191 *(191)*	157 *(157)*	2.7×10^4	2.2×10^4	0
3.1	*J p*	3.63 *(0.30)*	24.8 *(2.41)*	2.5	2 *(1.22)*	214 *(77)*	63 *(45)*	1.1×10^5	3.2×10^4	3.4 *(0.97)*
	J o	3.63 *(0.36)*	19.2 *(2.79)*	2.5		170 *(162)*	0	6.7×10^4	0	
	J t	3.1 *(0.33)*	0.8 *(0.55)*	2.5		319 *(20)*	480 *(76)*	3.9×10^3	5.8×10^3	

* *J p = J. phoenicea; J o = J. oxycedrus, J t = J. thurifera*

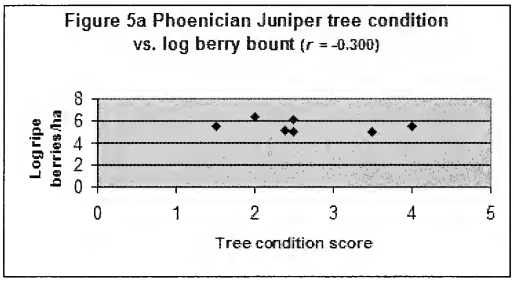
** Condition of vegetation: Undegraded = mean score for tree damage of 0–2.5; Degraded = mean score for tree damage of 2.6–5.0 (see Methods, Juniper tree parameters for further details)

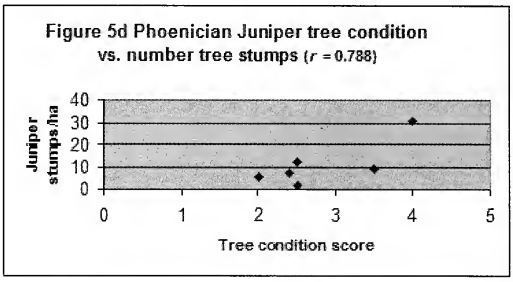
Other potential food sources

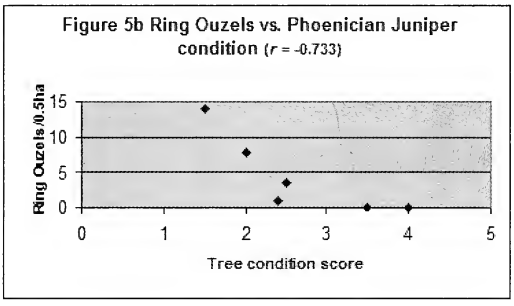
Table 1 shows that other berry species, namely Hawthorn *Crataegus* spp., Dog Rose *Rosa canina*, Red-berried Mistletoe *Viscum cruciatum* and Lentisc *Pistacia lentiscus*, were present in damper sites, such as valley bottoms, northern slopes and where overgrazing was less severe.

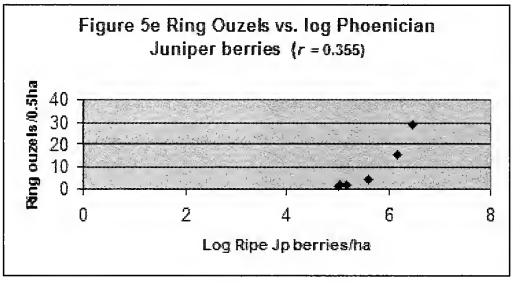
Presence of Ring Ouzels

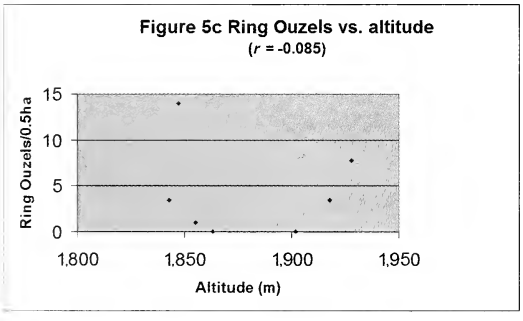
Ring Ouzels, seen at close quarters, appeared to be nominate *T. t. torquatus*. Although other species of thrush were recorded in all six types of berry rich habitat (Table 1), Ring Ouzels were only encountered in undegraded Phoenician Juniper woodland, except once where one was seen feeding on

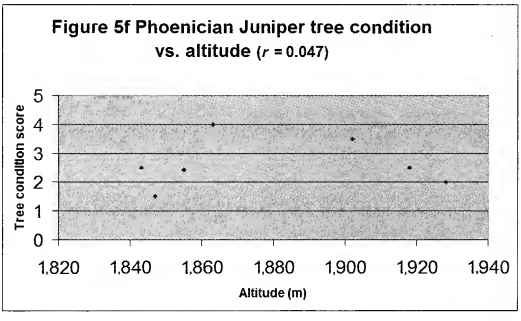












Figures 5a–f. Correlation coefficients (*r*) for a series of parameters relating to Ring Ouzels *Turdus torquatus* and juniper in the High Atlas.

Coefficients de corrélation (*r*) pour une série de paramètres concernant le Merle à plastron *Turdus torquatus* et le genévrier dans le Haut-Atlas marocain.

small rosehips in scrub close to sparse Phoenician Juniper (site 1.8). It is noteworthy that all sites where Ring Ouzels were seen or indicated by plentiful scats were less than 500 m from a source of water. Ring Ouzels were mainly in fast-moving flocks of *c.*4–30 birds accompanied by small numbers of other *Turdus* spp. (Blackbird *T. merula*, Mistle Thrush *T. viscivorus*, Song Thrush *T. philomelos* and Redwing *T. iliacus*). There was no correlation between altitude and number of Ring Ouzels seen (Fig. 5c).

Near Tounfite, Ring Ouzels' preference for Phoenician Juniper was attested by frequent sightings and copious droppings, on and around the trees. Such dense scat deposits were absent in other types of woodland. Ring Ouzels were not evident at sites containing Prickly Juniper without Phoenician Juniper, whether Prickly Juniper dominated (sites 1.9 and 2.2 only) or was secondary to Holm Oak (e.g. sites 2.3, 2.4 and 2.14). As shown in Table 2, no Ring Ouzels were recorded where Phoenician Juniper was seriously degraded (mean tree damage score >2.6), and Fig. 5b shows a strong negative correlation between condition of Phoenician Juniper trees and number of Ring Ouzels present (r = -0.733). However, the number

of ripe berries in Phoenician Juniper correlated weakly with number of Ring Ouzels seen (r = 0.355, Fig. 5e).

No Ring Ouzels were seen in the Middle Atlas during the 1993 visit (Transect 1) although at Aïn Nokra, Berber shepherds said they sometimes saw them in small groups in winter.

Discussion

This study, albeit small in scale, is a first attempt to quantify factors that may influence the survival of Ring Ouzels wintering in the Atlas Mountains and indicates areas for further elucidation.

Juniper as a food source for Ring Ouzels

All Ring Ouzels were seen in or close to Phoenician Juniper, often accompanied by smaller numbers of other *Turdus* spp., closely paralleling the observations of Snow (1952), Heim de Balsac (1931) and de Juana & Santos (1981). Heim de Balsac (1931), Blondel (1962) and Thévenot *et al.* (2003) considered both Prickly Juniper and Phoenician Juniper berries a major part of their winter diet. In the Spanish Sierra Nevada too, Ring Ouzels feed almost exclusively on juniper during the winter (Zamora 1990; pers. obs.) and their occurrence is strongly correlated with berry availability (Jordano 1993). This apparent specificity for juniper may apply only during midwinter because, as reported by other workers, Ring Ouzels occur in varied habitats during migration and then exploit other species of berry, in addition to juniper.

In this study, Ring Ouzels were only seen feeding in Prickly Juniper where it was with Phoenician Juniper, but not where it grew among Holm Oak. This may reflect overall berry availability. The berries of the two species are so similar, physical and to taste, that selection of one over the other seems unlikely. The mean ripe berry crop for all juniper sites (both juniper species) of 6.9×10^5 per ha closely matches that for Common Juniper (7×10^5 per ha) recorded in the Sierra Nevada (Garcia *et al.* 1996) but, like Jordano (1993), we found that the crop varied widely between areas. As a monoecious species (bearing male and female flowers on the same plant), all Phoenician Juniper trees can potentially bear berries, whereas in Prickly Juniper and Spanish Juniper, being dioecious (bearing male and female flowers on separate plants), only female trees (*c.*50%) can do so. The zero berry counts in Prickly Juniper at several sites may be due to a concentration of male plants or to a local berry failure in female trees. Jordano (1991) pointed out that the monoecious state in Phoenician Juniper is variable but is more than 90% in Morocco. Thus Prickly Juniper must usually contribute a small proportion of the total berry crop where both species occur.

As wide-ranging, opportunistic feeders, Ring Ouzels may be attracted primarily to extensive areas of juniper, e.g. Phoenician Juniper woodland, with high berry densities and low levels of disturbance, thus maximising foraging success, rather than to isolated patches or individual fruiting trees, e.g. Prickly Juniper, outnumbered amongst non-berry bearing species, e.g. by Holm Oak, though these may serve as stop-off points for migrants.

The condition of Phoenician Juniper trees, as well as number of berries, seems to be a key determinant of the presence of Ring Ouzel. We only found Ring Ouzel at five sites where cutting damage to Phoenician Juniper was low, but not in degraded stands, even with good berry crops. At an intermediate level of cutting, where trees still produce a good berry crop, disturbance from the frequent visits by small-scale wood collectors and livestock may keep Ring Ouzels away much of the time—a factor which also operates in parts of their breeding range (Burfield 2002).

However, not all berries on a juniper tree are edible. They take two years to ripen so, in autumn, trees contain both ripe and unripe berries, the ratio being variable (Table 2). In addition, a variable proportion of berries are either aborted or parasitised by insects, resulting in berries lacking pulp and with reduced nutritional value (Ionesco & Sauvage 1969). Garcia *et al.* (1999) found that Ring Ouzels rejected aborted and parasitised Common Juniper berries in the Sierra Nevada, thus necessitating greater foraging effort. The proportion of unpalatable berries can be substantial; we found levels of aborted or parasitised ranged from 0.2–18% (mean 6.1%), but Traveset & Sans (1994) recorded moth infestation levels to range from 3–50% of the crop in Phoenician Juniper in the Balearic Islands.

A further key factor in determining Ring Ouzels' choice of feeding site appears to be proximity to water. In this study, locations where the

birds were found were all within a few hundred metres of a water source. Ring Ouzels need to drink regularly whilst feeding on juniper berries. Heim de Balsac (1931), Arthur *et al.* (2000) and Thévenot *et al.* (2003) have commonly observed them drinking at rivers and waterholes in Morocco, as they do also in the Sierra Nevada when feeding on juniper berries (pers. obs.). This issue clearly needs further investigation.

Occurrence of juniper

Prickly Juniper was widespread, and like Quézel (1980), we found it associated with either Holm Oak or Phoenician Juniper woodland as a secondary or subdominant species. Phoenician Juniper was less widespread but where present was the dominant tree, forming open woodland interspersed with smaller numbers of Prickly Juniper and Holm Oak. Trees averaged 3.5 m in height, although near Tounfite some reached 8 m, the maximum for this species (Maire *et al.* 1952), with some trunk diameters of 0.6 m, indicating trees more than 500 years old, based on annular rings of stumps. In Emberger's (1938) day, Phoenician Juniper was very widespread in both the Middle and High Atlas up to 2,200 m, but we found it to be frequent if patchily distributed at 1,780–2,208 m in the High Atlas, and scarce in the Middle Atlas. Spanish Juniper has an altitudinal range of 1,800–3,150 m (Emberger 1938). Its apparent rarity in our study reflects the limits of altitudes visited. Its presence at 2,000 m near Inifif in the Middle Atlas (1.5) was also noted by Sauvage (1956).

Juniper damage and decline

Most of our sites had trees showing moderate to severe damage, which concurs with Quézel & Barbero (1981), who described stands of Phoenician Juniper as very degraded by human influence and livestock. We commonly saw local Berbers with donkeys, and even trucks, laden with juniper and Holm Oak wood. Of course, damage may be less severe at sites more remote than those in our study. All three juniper species are used for burning for cooking, heating and construction by the Berbers (Auclair 1996), and Phoenician and Spanish Junipers are used for livestock feed in droughts (Ionesco & Sauvage 1969).

We noted that stumps of smaller junipers often re-sprouted but, in older trees, some more than 500 years old, this was absent. This loss of regenerative ability with age was recognised by Emberger (1938) and Métro & Sauvage (1955). This habitat degradation is further exacerbated by the lack of recruitment of young trees due probably to a combination of overgrazing and drought, seen also in the Sierra Nevada (R. Zamora pers. comm.), and Quézel & Barbero (1981) noted a complete lack of juniper regeneration in the region of the Atlas Mountains.

Despite a statement to the contrary by Arthur *et al.* (2000), juniper is no longer being used sustainably in the Atlas. Auclair (1996) pointed out that traditional controls used to work well to preserve mountain forest but population increase in parts of the High Atlas is resulting in permanent forest loss; indeed, wood removal is twice the rate of production and stocking levels twice the sustainable level.

Lone junipers in vast areas of ploughed arable land on the lower mountain slopes and plains testify to large-scale clearance of juniper woodland. We are late in a long-term process of deforestation. In Roman times more than half of North Africa was densely forested (Blondel & Aronson 1999), whereas 17% remains in Morocco, including oak, cedar and juniper forest. Conacher & Sala (1998) observed that agricultural clearance and deforestation in the mountains of North Africa intensified from the late-18th century due to excessive woodcutting and overgrazing by sheep and goats. This scenario involves the long-term fragmentation and destruction of a key resource for Ring Ouzels. As Zamora (1990) and Jordano (1993) found in Spain, the Ring Ouzel is most probably the main dispersion vector for *Juniper* species in North Africa.

Conclusions

We focused on the occurrence of Ring Ouzels in relation to species of juniper, berry crop and degree of damage to trees. It must be recognised that this was a small-scale study, with Ring Ouzels only being detected at seven sites, and so the following conclusions must therefore be considered provisional.

The well-established link between wintering Ring Ouzels and juniper is confirmed, but this link is primarily with Phoenician Juniper, which contributes far more berries than Prickly Juniper, and therefore offers the most productive foraging option.

The presence of Ring Ouzels correlated with the condition of Phoenician Juniper. Where trees were severely damaged, indicative of a high level of human disturbance, there was no evidence of Ring Ouzel visits, even where ripe berries were plentiful.

Several factors are resulting in a long-term process of juniper woodland decline:

- unsustainable harvesting for firewood and forage
- loss of regenerative ability in the ageing stock of juniper trees
- an ageing population of juniper due to lack of recruitment of young trees from overgrazing, agricultural clearance and drought.

Burfield (2002) points out that, if UK birds share their wintering grounds with those from stable continental populations, the factors causing their decline are most likely to be acting in the breeding grounds or migration routes. However, at present, little is known of the ecology or movements of the two races, *T. t. torquatus* and *T. t. alpestris*, during the 5–6 months they are migrating and wintering in the mountains of North Africa. Neither is it known how much juniper is needed to support this Ring Ouzel population, particularly in a year with a poor berry crop and/or water is scarce near berry sources.

The total acreage of juniper woodland is unknown, as is its condition and the rates of fragmentation and loss. Juniper berry availability may not yet be a limiting factor for the species but as destruction continues this point must eventually come. Poor foraging in winter, for whatever reason, means poorer condition for migration and breeding.

Our study covered a small number of more accessible sites, during a short part of the winter period and did not include Spanish Juniper sites, which occur at higher altitudes. Nevertheless, our findings indicate aspects that future, more extensive studies could focus on:

- how much juniper is required to support the current Ring Ouzel population, in view of the variability of berry production
- the extent and status of juniper-rich habitat in Algeria and less accessible parts of the Moroccan Atlas
- the condition and rate of loss of the juniper woodland that remains
- the status of other berry species and their importance for migrating and wintering Ring Ouzels
- the importance and availability of water as a factor limiting the Ring Ouzel's ability to exploit available berry supplies.

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Appendix 1. Summary of the sites in Transect 1.

Annexe 1. Aperçu des sites le long du Transect 1.

Site no.	Site name	Location	Approx. altitude (m)	Site description	Juniper		Other berry species	Ring Ouzels
					spp. frequency	condition (score)		
1.1	Aguelmame Affenourir (MA)	SW of Azrou	1,800	Scrub lake, grazed grassland	None	N/A	Hawthorn Mistletoe, Rose	-
1.2	Aguelmame Affenourir (MA)	SW of Azrou	1,800	Cedar forest little ground cover	None	N/A	None	-
1.3	Aguelmame de Sidi Ali (MA)	S of Azrou	1,800	Scrub adjacent arable land, lake, river	None	N/A	Hawthorn Mistletoe, Rose	-
1.4	Aguelmame de Sidi Ali (MA)	S of Azrou	1,800	Cedar forest (moribund)	*J p* scarce *J o* scarce	4 /	None	-
1.5	Inifif (MA)	S of Azrou	2,000	*J t* woodland forestry exclosure	*J r* moderate	3	None	-
1.6	Aïn Nokra (MA)	S of Azrou	2,000	*Q ilex* woodland river valley	*J o* common *J p* scarce	3 /	Hawthorn Mistletoe, Rose	-
1.7 (2.19)	Tounfite (HA)	WSW of Midelt	1,928	*J p* woodland adjacent arable	*J p* common *J o* moderate *J t* rare	2 2 /	Hawthorn Mistletoe, Rose	+
1.8	Asselim (HA)	S of Midelt	1,600	Scrub adjacent juniper arable	*J p* moderate *J o* rare	3	Rose	+
1.9	S of Khénifra	S of Khénifra	/	*J o* scrub	*J o* dominant	1	Rose	-

Key:

MA = Middle Atlas; HA = High Atlas

J p = Juniperus phoenicea; J o = J. oxycedrus; J t = J. thurifera

/ = Data not collected

Condition of vegetation: Undegraded = mean score for tree damage of 0–2.5; Degraded = mean score for tree damage of 2.6–5.0 (see Methods, Juniper tree parameters for further details)

+ = Ring Ouzels present; - = Ring Ouzels absent

Appendix 2. Summary of the sites in Transect 2 and of Site 3.1.

Annexe 2. Aperçu des sites le long du Transect 2 et du Site 3.1.

Site no.	Location	Coordinates	Alt itude (m)	Site description	Juniper		Other berry species	Ring Ouzels
					spp. frequency	condition (score)		
2.1	SW of Demnate	31°38'N 07°14'W	1,003	*J p* woodland clearance for arable	*J p* dominant	3.5	*Pistacia* sp.	-
2.2	W of Azilal	31°54'N 06°42'W	1,247	*J o* woodland dense ground cover	*J o* dominant	1.5	*Pistacia* sp.	-
2.3	SE of Azilal	31°51'N 06°25'W	1,865	*Q ilex* woodland adjacent arable	*J o* moderate	4	None	-
2.4	W of El Kebab	32°43'N 05°34'W	1,231	*Q ilex* woodland adjacent arable	*J o* scarce	4	None	-
2.5	S of El Kebab	32°41'N 05°34'W	1,295	*Q ilex* woodland adjacent arable	*J o* moderate	3	None	-

2.6	SE of El Kebab	32°41'N 05°30'W	1,665	Bare ground near valley	None	N/A	None	-
2.7	Tanout-Ou-Filali	32°40'N 05°29'W	1,859	*Q ilex* woodland bare ground	*J o* scarce	3	None	-
2.8	Sidi Tiar	32°40'N 05°27'W	2,070	Plantation (pine) adjacent arable	*J o* scarce	4	Hawthorn Mistletoe, Rose	-
2.9	W of Boumia	32°39'N 05°24'W	1,842	Arable land adjacent tussock herbage	None	N/A	None	-
2.10	N of Tounfite	32°40'N 05°17'W	1,637	Arable land Totally denuded	None	N/A	None	-
2.11	N of Tounfite	32°34'N 05°16'W	1,813	Arable land adjacent tussock herbage	None	N/A	None	-
2.12	N of Tounfite	32°32'N 05°16'W	1,870	Scrub adjacent tussock herbage	None	N/A	None	-
2.13	N of Tounfite	32°31'N 05°16'W	1,895	*Q ilex* woodland adjacent arable	*J o* scarce	3	None	-
2.14	N of Tounfite	32°30'N 05°15'W	1,874	*Q ilex* woodland bare stony ground	*J o* common	3	Hawthorn, Mistletoe	-
2.15	N of Tounfite	32°29'N 05°14'W	1,847	*J p* woodland near river, near farm	*J p* dominant *J o* moderate	1.5 2	Hawthorn, Mistletoe, Rose	+
2.16	N of Tounfite	32°31'N 05°12'W	1,902	*J p* woodland ploughed below	*J p* dominant *J o* moderate	3.5 3.5	None	-
2.17	N of Tounfite	32°31'N 05°12'W	1,855	*J p* woodland mixed vegetation	*J p* dominant *J o* moderate	2.4 3.7	Rose	+
2.18	N of Tounfite	32°30'N 05°13'W	1,843	*J p* woodland near river	*J p* dominant *J o* scarce	2.5 3	None	+
2.19 (1.7)	E of Tounfite	32°29'N 05°10'W	1,928	*J p* woodland bare stony ground, adjacent arable	*J p* dominant *J o* scrace *J t* rare	2 2 /	None	+
2.20	SE of Tounfite	32°27'N 05°09'W	1,850	*J p* woodland near river	*J p* dominant *J o* scarce	3.5 4	Hawthorn Mistletoe	-
2.21	S of Tounfite	32°26'N 05°09'W	1,896	Scrub river gorge	None	N/A	Rose	-
2.22	S of Tounfite	32°25'N 05°09'W	1,866	Scrub river gorge	None	N/A	Rose	-
2.23	W of Tounfite	32°38'N 05°17'W	2,030	Cedar forest adjacent arable	*J p* scarce	/	Hawthorn Mistletoe	-
2.24	W of Tounfite	32°28'N 05°18'W	2,208	Cedar forest adjacent arable	*J p* scarce	/	Hawthorn Mistletoe	-
2.25	W of Tounfite	32°27'N 05°20'W	2,126	Cedar forest adjacent arable	*J p* scarce *J o* rare	/	Hawthorn Mistletoe	-
2.26	N of Boumia	32°34'N 05°11'W	1,810	Arable land adjacent tussock	None	N/A	None	-
2.27	S of Midelt	32°37'N 04°32'W	1,780	*J p* woodland boulders, tussock	*J p* dominant	4	None	-
2.28	S of Midelt	32°36'N 04°31'W	1,840	*J p* woodland boulders, tussock	*J p* dominant	2	None	-
2.29	S of Midelt	32°36'N 04°31'W	1,863	*J p* woodland boulders, tussock	*J p* dominant	3	None	-
2.30	S of Midelt	32°35'N 04°32'W	1,990	Plantation (pine) bare stony ground	None	N/A	None	-

2.31	S of Midelt	32°34'N 04°29'W	1,722	Tussock grassland low herbage	None	N/A	None	-
2.32	S of Midelt	32°34'N 04°29'W	1,466	Tussock grassland low herbage	None	N/A	None	-
2.33	Er Rich	32°34'N 04°29'W	1,308	Plantation (olive) adjacent arable	None	N/A	Rose	-
3.1	Road to Telouet	31°15'N 07°21'W	1,918	*J p* woodland Wooded valley some *Q ilex*	*J p* dominant *J o* common *J t* rare	2.5 2.5 0.25	Rose	+

Key:
J p = Juniperus phoenicea; J o = J. oxycedrus; J t = J. thurifera

/ = Data not collected

Condition of vegetation: Undegraded = mean score for tree damage of 0–2.5; Degraded = mean score for tree damage of 2.6–5.0 (see Methods, Juniper tree parameters for further details)

+ = Ring Ouzels present; - = Ring Ouzels absent

Appendix 3. Juniper density, condition and fruit crop at juniper-rich sites on Transect 2 and Site 3.1, and occurrence of Ring Ouzels *Turdus torquatus.*

Annexe 3. Densité et condition des genévriers et production de baies aux sites riches en genévriers le long du Transect 2 et au Site 3.1, et présence de Merles à plastron *Turdus torquatus.*

Site no.	Altitude (m)	Tree spp. present	Mean height (m) *(SE)*	Mean canopy diameter (m) *(SE)*	% of total trees present	Mean condition rating (0–5)	Mean berry count /m² *(SE)* ripe	unripe	Mean ROs / 100 ˜ 50 m transect
2.2	1,247	*J o*	3.1 *(0.40)*	2.25 *(0.47)*	95	1.5	298 *(64)*	0	0
		Non J			5				
2.3	1,865	*J o*	2.0 *(0.20)*	2.2 *(0.27)*	20	4	0	0	0
		Q i			80				
2.5	1,295	*J o*	1.8 *(0.16)*	2.1 *(1.5)*	30	3	4.5 *(4.8)*	*(0.5)* 0.5	0
		Q i	3.6 *(0.45)*	4.0 *(0.24)*	70				
2.7	1,859	*J o*			5	3	4.5 (4.7)	0	0
		Q i	6.2 *(0.54)*	4.6 *(0.26)*	95				
2.8	1,945	*J o*			10	4	0	0	0
		Q i	4.9 *(0.37)*	5.5 *(0.35)*	90				
2.13	1,895	*J o*			15	3	2.8	0	0
		Q i	2.4 *(0.21)*	2.15 *(0.31)*	85		*(3.6)*		
2.14	1,874	*J o*	2.0 *(0.25)*	1.9 *(0.42)*	32	3	9.6 *(10.7)*	0	0
		Q i	2.5 *(0.25)*	3.25 *(0.8)*	68				

2.15	1,847	*J p*	2.7	3.75	95	1.5	436	712	14
			(0.14)	(0.34)			*(106)*	*(180)*	*(4.04)*
		J o	2.9	2.17	5	2	0	0	
			(0.17)	*(0.30)*					
2.16	1,902	*J p*	3.5	3.14	82	3.5	1033	158	0
			(0.23)	*(0.22)*			*(189)*	*(63)*	
		J o	2.78	2.08	24	3.5	0	0	
			(0.22)	*(0.24)*					
		Cyp			9				
2.17	1,855	*J p*	3.8	3.39	12	2.4	448	68	1
			(0.40)	*(0.30)*			*(137)*	*(14)*	*(0.70)*
		J o	3.4	2.4	9	3.7	239	0	
			(0.91)	*(0.86)*			*(276)*		
2.18	1,843	*J p*	2.9	3.82	90	2.5	759	58	3.4
			(0.35)	*(0.43)*			*(168)*	*(23)*	*(0.45)*
		J o	2.5	2.64	4	3	0	0	
			(0.21)	*(0.31)*					
2.19	1,928	*J p*	5.6	5.6	40	2	1309	92	7.8
			(0.49)	*(0.37)*			*(224)*	*(80)*	*(3.45)*
		J o	2.9	2.9	15	2	0	0.8	
			(0.40)	*(0.78)*				*(0.9)*	
		J t	3.35	3.15	0.4	1	-	-	
			(0.10)	*(0.10)*					
2.29	1,863	*J p*	2.1	2.12	60	4	191	157	0
			(2.1)	*(0.55)*			*(191)*	*(157)*	
3.1	1,918	*J p*	3.8	3.63	28	2.5	214	63	3.4
			(0.53)	*(0.30)*			*(77)*	*(45)*	*(0.97)*
		J o	4.4	3.63	13	2.5	170	0	
			(0.37)	*(0.36)*			*(162)*		
		J t	3.1	3.1	0.8	0.25	319	480	
			(0.24)	*(0.33)*			*(20)*	*(76)*	

Key: *J p* = *Juniperus phoenicea*; *J o* = *J. oxycedrus; J t* = *J. thurifera; Qi* = *Quercus ilex*;; *Cyp* = *Cyperus* sp.; ROs = Ring Ouzels

First record of Rose-coloured Starling *Sturnus roseus* for Ethiopia and sub-Saharan Africa

Valéry Schollaert

Première mention de l'Etourneau roselin *Sturnus roseus* pour l'Ethiopie et l'Afrique subsaharienne. Un Etourneau roselin *Sturnus roseus* a été observé en compagnie d'Étourneaux caronculés *Creatophora cinerea* et photographié à environ 50 km à l'ouest de Yavello, le long de la route vers Arba Minch (05°06'N 37°53'E), Éthiopie, le 23 mars 2005. Ceci constitue la première donnée pour l'Afrique sub-saharienne de cette espèce paléarctique, connue pour son nomadisme et ses mouvements erratiques.

On 23 March 2005, whilst leading a birding trip in Ethiopia, I decided to stop for breakfast *c.*50 km west of Yavello, on the road to Arba Minch (05°06'N 37°53'E). While the guides and drivers were preparing the food, we birded in the area. At the edge of a small field that made a clearing in the dense bush, we found some perching Magpie Starlings *Speculipastor bicolor*. On the ground was a group of Wattled Starlings *Creatophora cinerea* with an odd individual. Compared to the Wattled Starlings, the other bird was very dark, almost black, with a very pale breast and belly and a yellowish bill. I immediately identified it as a Rose-coloured Starling *Stunus roseus*, a species with which I had previous experience in Bulgaria, a country where I lead groups regularly. Henry Brousmiche, a member of the group, quickly took some photographs. Thereafter we were able to get closer, observe all the plumage details and obtain better photographs (Fig. 1, p. 76). After some 15 minutes, the bird flew away to the west with some of the group of Wattled Starlings.

Although broadly similar to the Wattled Starlings in size and shape, the bird appeared slightly smaller and slimmer, and the bill was slightly thinner. The head, neck and throat were glossy blackish, except the lores which were solid black. The blackish colour of the hindneck also reached the upper mantle, the rest of the mantle and the scapulars being paler, somewhat dirty whitish. The wings were relatively long and blackish, with slightly paler coverts. The medium-long tail was also blackish. The breast, flanks and upper belly were dirty whitish, with a pinkish (or salmon) tinge. The lower belly and vent were dirty blackish and the undertail-coverts pale brown dotted black. The bill was yellowish orange, the legs pink. The bird foraged in a similar manner to the Wattled Starlings. This description matches an adult Rose-coloured Starling in non-breeding plumage (Cramp & Perrins 1994, Feare & Craig 1998).

This appears to be the first record south of the Sahara of this Palearctic species (Fry *et al.* 2000), which is nomadic and often erratic in its movements. Its main breeding range extends from the Balkans to Central Asia, and it migrates to the Indian subcontinent for the winter. Vagrants have been recorded in Western Europe, North Africa and Seychelles (Fry *et al.* 2000).

Acknowledgements

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Figure 1. Rose-coloured Starling *Sturnus roseus*, *c.*50 km west of Yavello, Ethiopia, 23 March 2005 (Henry Brousmiche)

Étourneau roselin *Sturnus roseus*, environ 50 km à l'ouest de Yavello, Éthiopie, 23 mars 2005 (Henry Brousmiche)

Figure 2. Unidentified egg in Royal Tern *Sterna maxima* colony, Bijol Islands, The Gambia, 25 April 2005 (John High)

Œuf non identifié dans la colonie de Sternes royales *Sterna maxima*, îles Bijol, Gambie, 25 avril 2005 (John High)

Figure 3. Birdled Tern *Sterna anaethetus*, Bijol Islands, The Gambia, 25 April 2005 (John High)

Sterne bridée *Sterna anaethetus*, îles Bijol, Gambie, 25 avril 2005 (John High)

Figure 4. Habitat du Grand-duc du désert / habitat of Desert Eagle Owl *Bubo* (*bubo*) *ascalaphus*, Markoye, Burkina Faso, 23 mars 2005 (Yvan Perré)

Figures 5–6. Grand-duc du désert / Desert Eagle Owl *Bubo* (*bubo*) *ascalaphus*, Markoye, Burkina Faso, 21 novembre 2005 (Yvan Perré)

First record of Bridled Tern *Sterna anaethetus* for The Gambia

John High

Première mention d'une Sterne bridée *Sterna anaethetus* pour la Gambie. En 2005 une Sterne bridée *Sterna anaethetus* adulte a sejourné sur les îles Bijol, dans la Réserve d'oiseaux de Tanji, dès le 24 mars. Le 25 avril, l'oiseau était observé dans la colonie de Sternes royales *S. maxima*. Un œuf blanc-sale uni fut trouvé, dont la taille (43.9 ˜ 33.5 mm) correspondait à celle notée pour la Sterne bridée, mais la coloration et la forme ne correspondaient pas et l'œuf n'a pas pu être identifié. La sterne, dont pas plus d'un individu ne fut observé, était présente au moins jusqu'au 24 août. Ceci constitue la première donnée pour la Gambie.

On 24 March 2005, whilst assisting the Gambian Department of Parks and Wildlife Management (DPWM) staff with their monthly census work on the Bijol Islands, which is part of Tanji (Karanti) Bird Reserve, Western Division, The Gambia (13°23'N 16°44'W), I noticed a dark-winged tern resting on the ground. It was smaller than nearby Grey-headed Gulls *Larus cirrocephalus* but much larger than the Little Terns *Sterna albifrons*. I watched the bird in good light at *c.*30 m with 8 × 42 binoculars. The dark grey colour of the upperparts was similar to that of Lesser Black-backed Gull *Larus fuscus* and paler than that of nearby Kelp Gulls *L. dominicanus*. The underparts were white. The jet black cap extended to the nape, contrasting with the white forehead, which extended as a supercilium slightly beyond the eye. The wings were long and extended almost to the tip of the long tail. The bill was slender and black, the legs blackish. I did not flush the bird to see its flight features.

I had not seen this species before and referred to *A Field to the Birds of The Gambia and Senegal* (Barlow *et al.* 1997) on my return home, but failed to find it illustrated. I then consulted *Birds of Western Africa* (Borrow & Demey 2001) and immediately identified the bird as an adult Bridled Tern *Sterna anaethetus*. On my next visit to the Bijol Islands, on 3 April, I did not see the bird, but during the following monthly census, on 25 April, it was present again (Fig. 3, p. 76). In the Royal Tern *S. maxima* colony we found a different, plain off-white egg measuring 43.9 × 33.5 mm (Fig. 2, p. 76), the only egg of this size and colour of a total of 10,500 eggs counted that day. Although its size is consistent with the known range for Bridled Tern (40–46 × 28.5–33.2 mm: Cramp 1985, Urban *et al.* 1986), its shape and coloration are not (Cramp 1985, D. Russell *in litt.*). Royal Tern eggs are noticeably larger (67–69 × 46 mm: Urban *et al.* 1986) and very heavily blotched or spotted. Although it cannot be wholly eliminated that the egg in Fig. 2 was an abnormal Bridled Tern egg, this seems a rather remote possibility (D. Russell *in litt.*); the egg, therefore, has to remain unidentified. The Bridled Tern was aloft close to the egg location throughout the period we were surveying the tern colony and often chased Grey-headed Gulls in the vicinity. Additional features observed in flight included the white underparts, off-white underwing becoming dark grey on the flight-feathers, a deeply forked tail with at least the outer web of the very long outer tail-feathers white. No more than one Bridled Tern was seen at any one time over several visits. The bird was still in attendance during subsequent visits on 24 July and 24 August, but was not seen thereafter.

This appears to be the first record of Bridled Tern for The Gambia: no records are mentioned in Barlow *et al.* (1997), nor have any been reported since (C. Barlow pers. comm.). However, its presence was to be expected, as the species has been recorded in Senegal, where a few pairs breed in the Îles de la Madeleine and Langue de Barbarie National Parks, and Guinea-Bissau (Morel & Morel 1990, Dowsett 1993, Barlow *et al.* 1997). Elsewhere in West Africa, it breeds on the Banc d'Arguin in Mauritania and on the Gulf of Guinea islands São Tomé (at the islets of Sete Pedras) and Annobón. It disperses offshore after breeding and has been sparsely recorded along the coast, from

Guinea-Bissau to Equatorial Guinea and (probably) Gabon (Borrow & Demey 2001).

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Première mention du Grand-duc du désert *Bubo* (*bubo*) *ascalaphus* pour le Burkina Faso

Guilhem Lesaffre[a] et Yvan Perré[b]

First record of Desert Eagle Owl *Bubo* (*bubo*) *ascalaphus* for Burkina Faso. On 21 February 2005 we flushed two Desert Eagle Owls *Bubo* (*bubo*) *ascalaphus* from a small bushy tree in the Markoye area of northernmost Burkina Faso (14°43'N 00°00). The birds were seen again, and one of them photographed, on 23 March and 16 and 21 November 2005. This is the first record of this species for the country. The nearest known sites, both in Mali, are Hombori-Douentza and Gao, 200–300 km west-northwest and 180 km north of Markoye, respectively.

Le 21 février 2005, à la recherche de l'Ammomane isabelline *Ammomanes deserti*, nous prospectons des buttes d'éboulis granitiques qui se dressent dans la région de Markoye, province de l'Oudalan, à l'extrême nord du Burkina Faso (14°43'N 00°00), en zone sahélienne. Alors que nous nous dirigeons vers un petit arbre touffu isolé—un *Maerua crassifolia* de 3,5 m environ—, situé dans la partie inférieure d'une butte, un grand rapace nocturne s'envole du cœur du feuillage et nous survole, montrant un dessous d'aile presque blanc avec une nette tache sombre au poignet. L'oiseau poursuit son vol et disparaît derrière un relief proche.

Nous approchons de l'arbre pour vérifier la présence de pelotes de réjection lorsqu'un deuxième oiseau s'envole de la même manière que le premier. Il se pose à une centaine de mètres, dans les blocs rocheux en contrebas, se laissant observer durant plusieurs minutes. L'oiseau, de bonne taille, présente un aspect général très pâle. Le dessus (manteau, scapulaires et ailes) est beige soutenu criblé de taches brun sombre et blanchâtres. Le dessous est beige pâle, bien marqué de taches noirâtres alignées en rayures au niveau de la poitrine. Les disques faciaux sont beige pâle, bordés et soulignés d'une bande noirâtre. Les aigrettes sont bien visibles. L'iris est orangé.

L'ensemble de ces caractères correspond à ceux présentés par le Grand-duc du désert *Bubo* (*bubo*) *ascalaphus* (Borrow & Demey 2004). Le 23 mars, ainsi que le 16 et le 21 novembre, YP se rend sur le site, revoit les oiseaux et parvient à photographier (digiscopie) l'un d'eux (Fig. 5, p. 76).

Cette donnée constitue la première mention de *Bubo* (*bubo*) *ascalaphus* pour le Burkina. Elle s'inscrit comme un jalon supplémentaire de la limite sud de l'espèce, que la carte figurant dans Borrow & Demey (2004) situe à hauteur de l'est du lac Tchad, du sud du Niger et du centre du Mali, soit aux abords de 16°N. Les sites connus les plus proches, tous deux au Mali, sont Hombori-Douentza (Dowsett-Lemaire & Dowsett 2006) et Gao (Robertson 2001), respectivement à 200–300 km ouest-nord-ouest et 180 km au nord de Markoye. Douentza est à 15°00'N exactement.

La butte concernée, haute de 20 m et longue de 250 m environ, fait partie d'une série de six éboulis rocheux allongés et quasi contigus, s'étendant au total sur environ 2 km. Le plus petit, mesurant une centaine de mètres de long, est à peine surélevé par rapport à la plaine environnante, tandis que le plus haut la domine de quelque 40 m. Il existe d'autres zones d'éboulis analogues dans la région, dont la butte de la mine de Tambao, située à une dizaine de kilomètres du site de l'observation, ou la grande ligne d'éboulis couvrant 2 ou 3 km le long de la piste entre Markoye et Gorom. Une prospection de l'ensemble de ces milieux favorables pourrait permettre de préciser le statut du Grand-duc du désert dans le nord du Burkina.

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Nous remercions Jean-Marc Thiollay pour nous avoir encouragés à publier cette note, Ron Demey pour l'accueil qu'il nous a réservé et Françoise Dowsett-Lemaire pour les remarques constructives qui ont permis de situer la mention dans son contexte régional.

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First records of Blackcap *Sylvia atricapilla* for Mozambique

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Premières mentions de la Fauvette à tête noire *Sylvia atricapilla* pour le Mozambique. Le 6 décembre 2001 un mâle de la Fauvette à tête noire *Sylvia atricapilla* a été capturé au filet japonais sur le Plateau de Muretha, qui fait partie du Massif de Namuli, au nord du Mozambique. Plusieurs cris et un chant ont été entendus, permettant d'estimer qu'au moins cinq individus étaient présents. Ces données sont les premières pour le Mozambique. Les auteurs suggèrent que le Plateau de Muretha pourrait constituer un aire d'hivernage pour cette espèce.

On 1–6 December 2001, we visited the Namuli massif in northern Mozambique (15°12'S 36°52'E), spending most of our time in the Ukalini forest and on the Muretha Plateau. The objective of our visit was to gather information on the birds, through observation and mist-netting (a report on the visit can be obtained from MM). Palearctic migrants we observed included Garden Warbler *Sylvia borin* and Willow Warbler *Phylloscopus trochilus* (common), and Tree Pipit *Anthus trivialis* (one).

On 5–6 December we visited the Muretha Plateau. The habitat is high-altitude grassland with scattered small patches of montane forest. Upon arrival we heard several times a metallic *tacc*, repeated regularly, apparently the contact call of a Blackcap *Sylvia atricapilla*, but we could not confirm this as we did not see the callers and were unfamiliar with the vocalisations of the birds of the area. After we had set up a 6-m mist-net in one of the forest patches where Garden and Willow Warblers were common, we immediately caught a male Blackcap (wing: 75.5 mm, tarsus: 23.1 mm, mass: 18.4 g; Fig. 1). Subsequently we continued hearing the contact calls and KDD once heard a song. At least five individuals were present. Two Garden Warblers were also captured. To our knowledge these are the first records of Blackcap for Mozambique.

Status and distribution

Blackcap is one of the best-studied Palearctic migrants. Its breeding population spans the Western Palearctic, reaching south-west Siberia in the east, western Norway in the north, and north-west Africa and Iran in the south (Urban *et al.* 1997, Shirihai *et al.* 2001). The species has different migratory strategies corresponding to breeding area: northern breeding populations are wholly migratory, south-western populations are partial

Figure 1. Blackcap *Sylvia atricapilla* trapped on the Muretha Plateau, Mozambique, December 2001 (Klaas-Douwe Dijkstra)

Fauvette à tête noire *Sylvia atricapilla* capturée sur le Plateau de Muretha, Mozambique, décembre 2001 (Klaas-Douwe Dijkstra)

Figure 2. The Muretha Plateau, looking north-east, with the Namuli Massif in the background, 6 December 2001 (M. Melo)

Le Plateau de Muretha, vu vers le nord-est, avec le Massif de Namuli en arrière-plan, 6 décembre 2001 (M. Melo)

migrants, and Atlantic and Mediterranean populations are largely resident. Most migrants winter in Africa, some in south-western Europe and a wintering population has recently become established in Great Britain. In Africa, three wintering areas can be defined: north of the Sahara, in the savannas of West Africa and in the highlands of north-east and East Africa. The southernmost wintering population is found in the mountains of Malawi (*c.*14°30'S; Urban *et al.* 1997). There are several recent records from the eastern highlands of Zimbabwe, very close to the Mozambican border (Cohen 1997). Vagrants have been reported in South Africa since 1985 (Sinclair *et al.* 1987), suggesting that the species might be a more regular visitor than currently thought. It may have been overlooked in the past due to its inconspicuous behaviour or the records could indicate an expansion of its wintering range (Cohen 1997).

The Namuli Massif

The Namuli Massif contains one of the most overlooked remnants of Eastern Arc montane forests. The ornithological importance of the area was demonstrated by an expedition in 1998, nearly 70 years after it was last visited by a naturalist (Ryan *et al.* 1999a, b). Namuli Apalis *Apalis* [*thoracica*] *lynesi*, Mozambique's only endemic bird, is restricted to this area, and two other restricted-range species, Cholo Alethe *Alethe choloensis* and Spot-throat *Modulatrix orosthrutus*, occur. All three species are of global conservation concern (Parker 2001). Our Blackcap records suggest that the Muretha Plateau (and probably other areas of the Namuli Massif as well) might constitute a wintering area for the species, as it offers a habitat typical of the winter quarters in East Africa and there is a wintering area further south, in Malawi.

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First records of Mottled Swift *Tachymarptis aequatorialis* and Alpine Swift *T. melba* for Niger

Kim Diget Christensen[a], Anders P. Tøttrup[b] and Flemming Pagh Jensen[c]

Premières mentions pour le Niger du Martinet marbré *Tachymarptis aequatorialis* et du Martinet alpin *T. melba*. Les auteurs documentent la découverte de deux espèces nouvelles pour le Niger. Un Martinet marbré *Tachymarptis aequatorialis* a été observé dans un groupe mixte de martinets près du Grand Hôtel à Niamey, le 27 août 2004. Six Martinets alpins *T. melba* ont été vus en compagnie de 14 Martinets noirs *Apus apus* à environ 65 km à l'ouest de Zinder (13°69'N 09°57'E), le 31 août 2004.

In 2004 we made bird observations in Niger as part of the Project Régional de Lutte Integrée contre les Sauteriaux au Sahel (PRéLISS), which was initiated in 2002 and funded by the Danish International Development Agency (DANIDA). During this project intensive ornithological research was conducted and in 2003 four species that were new to Niger were recorded (Christensen *et al.* 2005). We report two other additions to the country's avifauna, recorded during the survey in 2004.

Mottled Swift

On 27 August 2004, at 08.30 hrs, a large dark swift with a paler belly was discovered in a mixed flock of Common Swifts *Apus apus*, Little Swifts *A. affinis* and African Palm Swifts *Cypsiurus parvus* near the Grand Hôtel, Niamey (zone 2 in Giraudoux *et al.* 1988). It was observed for *c.*10 minutes until the flock disappeared to the other side of the river. A few minutes later the large swift returned with the flock and flew above us for another five minutes. It was clearly larger than the other species in the flock and its wingbeats were noticeably slower. We estimated that its wingspan was *c.*30% larger than that of the Common Swifts. The plumage was dark brown overall, but the belly was mottled paler brown to grey and the throat was grey. The tail was forked. These are diagnostic features of Mottled Swift *Tachymarptis aequatorialis* (Borrow & Demey 2001). The only other swift of that size is Alpine Swift *T. melba*, which has a white belly and throat, and is well known to us.

The distribution of Mottled Swift in West Africa is patchy and inadequately known. It has been recorded from Guinea to eastern Chad and north-east Central African Republic (Fry *et al.* 1988, Borrow & Demey 2001). The nearest records are *c.*400 km to the north-west in Mali and *c.*500 km to the west in Burkina Faso (Balança & de Visscher 1993, Dowsett & Dowsett-Lemaire 2005), only a short distance for a large swift. This is the first documented record of Mottled Swift for Niger: the species is not included in Dowsett's (1993) checklist for the country and is not mapped for Niger in Borrow & Demey (2001).

Alpine Swift

On 31 August 2004, at 07.30 hrs, a flock of swifts, containing 14 Common Swifts and six Alpine Swifts, was found *c.* 65 km west of Zinder in western Niger (13°69'N 09°57'E, zone 3 in Giraudoux *et al.* 1988). The birds were foraging fairly low at 15–20 m above the ground in excellent light, making viewing conditions ideal. They were observed for ten minutes before they disappeared to the south. The Alpine Swifts were *c.*20% larger than the Common Swifts and had distinctively slower wingbeats. The upperparts were uniformly brown and contrasted with the pure white belly and throat, which were separated by a dark brownish breast-band. The dark brownish tail was shallowly forked. The underwing-coverts appeared brownish with slightly paler flight-feathers. Mottled Swift, the only other large swift in Africa, has very differently coloured and patterned underparts.

Alpine Swift is a Palearctic passage migrant and winter visitor to West Africa, from Mauritania to Liberia east to Cameroon, with large flocks being frequently recorded in Ghana, Togo and

Nigeria (Fry *et al.* 1988, Borrow & Demey 2001). Although it has been reported to breed on the Bandiagara escarpment, central Mali, where common (Thiollay 1974), this has recently been questioned by Dowsett & Dowsett-Lemaire (2005). The observed birds are most likely Palearctic visitors from north-west Africa or Europe. Migration through the southern Palearctic occurs mainly in September–October, though there is some southward movement in August by juveniles at least (Cramp 1985). In Mali, birds are said to arrive in September–October (Lamarche 1980). This appears to be the first documented record of Alpine Swift for Niger. Although Fry *et al.* (1988) mention records of 2–200 Alpine Swifts in Niger and Nigeria, we have not been able to track the origin of these records and the species is not included in Dowsett's (1993) checklist for the country, nor is it mapped or mentioned for Niger in Borrow & Demey (2001).

Acknowledgements

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Première observation du Picatharte du Cameroun *Picathartes oreas* au Congo-Brazzaville

Victor Mamonekene[a] et Frédéric Lambert Bokandza-Paco[b]

First record of Grey-necked Picathartes *Picathartes oreas* for Congo-Brazzaville. We report the sighting of Grey-necked Picathartes *Picathartes oreas* in Mayombe forest, Congo-Brazzaville, on 22 December 1994. This record constitutes the first for the country and is the southernmost locality for the species, formerly known only from eastern Nigeria to Gabon.

Le 22 décembre 1994, au cours d'une mission dans la forêt du Mayombe, au sud-ouest du Congo-Brazzaville, nous avons observé un Picatharte du Cameroun *Picathartes oreas* le long de la Route Nationale n°1, à environ 20 km à l'ouest de Les Saras (04°22'S 12°22'E). L'oiseau était au sol dans un bas-fond près d'un ruisseau et sautillait entre les pieds d'*Aframomum giganteum* (Zingibéracées) sans s'envoler. Il présentait indiscutablement la taille, la forme et les couleurs caractéristiques du Picatharte du Cameroun et nous avons pu noter le rouge du dessus de la tête et de la nuque, la longue queue foncée et les longues pattes gris-foncé. Le biotope était constitué de forêt vierge avec un sous-bois où dominait *Aframomun giganteum* et, au bord de la route, des espèces de forêt secondaire ayant poussé à la faveur du nettoyage de la voie. Cette partie du Mayombe est peu perturbée en comparaison avec des zones adjacentes; elle fait partie de la Réserve de Biosphère de Dimonika (non fonctionnelle). L'observation a été faite au début de la saison des pluies dans cette partie du Congo.

Ceci constitue la première observation au Congo-Brazzaville du Picatharte du Cameroun, qui jusqu'alors n'était connu que du Nigeria, du Cameroun, de la Guinée Equatoriale et du Gabon (Dowsett-Lemaire & Dowsett 1991, Dowsett 1993, Fry 2000, Borrow & Demey 2001). La localité la plus proche est Mouila, au Gabon, environ 300 km au nord-ouest (Collar & Stuart 1985). L'espèce est considérée comme menacée et sa population est estimée à seulement 10.000 individus (BirdLife International 2000).

Bien que les travaux de Dowsett-Lemaire & Dowsett (1989a, b, 1991) aient considérablement augmenté les connaissances sur l'avifaune du Mayombe, la rencontre fortuite de cette espèce jamais signalée auparavant sur ce site indique que la forêt cache encore une diversité qui mériterait des recherches plus poussées.

Remerciements

Nous remercions Michel Louette du Musée Royal de l'Afrique Centrale, Tervuren, Belgique, pour nous avoir encouragés à partager cette information et ouvert sa bibliothèque. Françoise Dowsett-Lemaire et Ron Demey sont remerciés pour leurs commentaires sur le manuscrit.

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Note de la rédaction. Bien que R. C. Fotso (1993. Contribution à l'étude de la biologie du Picatharte chauve du Cameroun *Picathartes oreas. Proc. VIII Pan-Afr. Orn. Congr.* 431–437) affirme que le domaine de l'espèce s'étend jusqu'au nord-est du Congo, à la frontière avec le Cameroun, aucune observation n'est connue de cette zone jusqu'à présent. L'observation dans le Mayombe, présentée ci-dessus, constitue donc bien la première pour le Congo-Brazzaville.

First Pink-backed Pelican *Pelecanus rufescens* sightings in Madagascar since 1960

Martin Mwema[a] and Felix Razafindrajao[b]

Premières observations du Pélican gris *Pelicanus rufescens* à Madagascar depuis 1960. Trois observations du Pélican gris *Pelecanus rufescens* au Lac Bedo, dans le sud-ouest de Madagascar, sont rapportées: deux individus ont été vus le 21 septembre 2003 et un individu le 18 novembre et le 12 décembre 2004. L'espèce n'avait plus été vue depuis 1960.

On the morning of 18 November 2004, a pelican was sighted at Lake Bedo (19°55'S 44°32'E), south-west Madagascar, by a group of eight Tropical Biology Association course participants (for a description of the site, see Young & Razafindrajao 2006). The bird flew out of the vegetation on a small island near the middle of the lake, *c.*500 m from the shore. It circled around the island for *c.*7 minutes before disappearing again into the vegetation, from which it did not emerge. At one point the pelican came as close as *c.*100 m from the shore. It thus gave the observers ample opportunity to note its features and consult an identification guide (Langrand 1990) while it was still in view.

The bird was largely whitish with a pale grey cast. The bill and pouch appeared pale grey. It had a black patch in front of the eye resembling a teardrop from a distance. In flight, there was no conspicuous contrast between the dark flight-feathers and the pale grey wing-coverts.

MM, who first noticed the bird, identified it as a Pink-backed Pelican *Pelecanus rufescens*, based on the above features. Great White Pelican *P. onocrotalus* is larger and whiter and has darker, blackish, flight-feathers. He pointed it out to Dr Julia Jones, the group leader, who agreed with his identification. Other group members also positively identified the pelican from the guidebook. MM returned to the site with another group of students in the afternoon, but the pelican was not seen again.

FR, having been informed by Dr Jones of the observation, visited the site on 12 December 2004 and found the pelican still present. FR had seen two pelicans at Lake Bedo previously, on 21 September 2003, but had been unable to positively identify them to species. Having subsequently observed the two pelican species in Kenya, he is now confident that these birds were also *P. rufescens*, based on the above features.

These are the first pelican sightings in Madagascar since 1960 (Langrand 1990, Morris & Hawkins 1998). Pink-backed Pelican was first mentioned for Madagascar by Verreaux (1865) and the species was subsequently known as an accidental visitor (Delacour 1932). Paulian (1959), citing P. Griveaud, reports the discovery of a small breeding colony south-west of Antsalova, *c.*150 km north of Lake Bedo, in 1958. A group was seen by Y. Therezien and R. Legendre in August 1959 north of Belo-sur-Tsiribihina, *c.*75 km north of Lake Bedo (Milon *et al.* 1973). The colony in the Antsalova Lake region was still present in 1960 (Paulian 1961), but as there were no subsequent sightings it is thought that the colony was exterminated by local villagers (Langrand 1990, Morris & Hawkins 1998). Although the possibility of a colony existing somewhere in the country cannot be entirely eliminated, most observers consider the species to be a vagrant. Pink-backed Pelican is the only pelican observed in Madagascar to date. Great White Pelican, a common migratory species in East Africa that could reach Madagascar as a vagrant, has never been recorded from the Malagasy region (Elliott 1992).

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First record of Kermadec Petrel *Pterodroma neglecta* for Seychelles

Cas Eikenaar[a] and Adrian Skerrett[b]

Première mention du Pétrel des Kermadec *Pterodroma neglecta* pour les Seychelles. Un Pétrel des Kermadec *Pterodroma neglecta* était présent à Cousin le 29 août 2003 et (probablement le même individu) le 29 juin 2004. Cette mention a été acceptée par le Comité d'Homologation Seychellois comme la première pour le pays.

On 29 August 2003 Cas Eikenaar (CE) noted a medium-sized seabird on the hill of Cousin Island Nature Reserve within an open patch near dense vegetation. It was very obviously different to the Audubon's Shearwaters *Puffinus lherminieri* and Wedge-tailed Shearwaters *P. pacificus*, common in the vicinity. Having taken two photographs (Fig. 1), CE approached the bird in order to examine it in the hand and take more photographs. The bird moved into the vegetation where it was caught next to a Wedge-tailed Shearwater, with which it showed no aggressive interactions. In the hand, the bird proved to be very strong and could only be controlled by holding the tail, wings and legs (Fig. 2). As a result, with no one to assist, the underwing was not properly examined and not photographed. Following release, the bird settled next to the Wedge-tailed Shearwater, again showing no aggressive interactions. The bird could not be relocated the next day. The photographs and description were submitted unidentified to the Seychelles Bird Records Committee (SBRC).

CE departed Cousin Island on 12 September 2003, returning on 20 May 2004. On 29 June 2004, what appeared to be a similar or the same bird was located at exactly the same spot as the previous year. The bird was caught and examined (Figs. 3–4). With the assistance of Lyanne Brouwer, it was possible to examine the underwing and to take measurements and a blood sample. Again, details were sent to SBRC.

Description of first bird

Pale grey-brown to white underparts contrasting with darker upperparts and wings. Back dark; upper back to neck gradually becoming greyish brown. Paler head also contrasted with darker upperparts. Whitish patch on lores extending to above and below striking dark eye. Sturdy neck and short, thick dark bill. Area below gape and chin darker, greyish brown. Crown, hindneck and face-sides darker greyish brown. Forecrown slightly darker (especially feather centres). Dark tail, tip shorter or equal to tip of wings. Did not appear weak (as far as that can be judged without previous experience of the species) and resisted with great strength upon capture.

Description of second bird

Appeared identical to first bird. In addition, examination of underwing revealed this was mainly dark with white patch at base of primaries and white primary shafts. White primary shafts noted on upperwing. Measurements: weight 410 g, tarsus 41.8 mm, tarsus–toe 105 mm, folded wing 30.7 cm, stretched wing 46.7 cm, undertail 120 mm, uppertail 105 mm, head + bill 80.6 mm, bill from tip of nail in straight line to furthest point of gape 33.3 mm, bill depth measured just before nasal tube 30.1 mm.

Analysis by SBRC

Following circulation around the committee, examination of museum specimens at The Natural History Museum (Tring, UK) and consultation with contacts having experience of *Pterodroma* breeding at Mauritius and on islands in the Pacific, the SBRC concluded that the notes and photographs submitted for the first observation were insufficient to conclusively distinguish between Herald Petrel *Pterodroma arminjoniana* and Kermadec Petrel *P. neglecta*. The second observation, however, was accepted as Kermadec Petrel. Given the absence of previous records from Seychelles, the extreme similarity in overall appearance of the birds photographed in August 2003 and June 2004 and the fact that the observa-

Figures 1–2. Kermadec Petrel / Pétrel des Kermadec *Pterodroma neglecta*, Cousin, Seychelles, 29 August 2003 (Cas Eikenaar)

Figure 3. Kermadec Petrel *Pterodroma neglecta*, Cousin, Seychelles, 29 June 2004 (Cas Eikenaar). Note white patch on basal two-thirds of inner primary webs.

Pétrel des Kermadec *Pterodroma neglecta*, Cousin, Seychelles, 29 juin 2004 (Cas Eikenaar). Notez la tache blanche sur les deux-tiers proximaux des vexilles internes des rémiges primaires.

Figure 4. Kermadec Petrel *Pterodroma neglecta*, Cousin, Seychelles, 29 June 2004 (Cas Eikenaar). Note white primary shafts in upperwing.

Pétrel des Kermadec *Pterodroma neglecta*, Cousin, Seychelles, 29 juin 2004 (Cas Eikenaar). Notez les rachis blancs des rémiges primaires vues du dessus.

tions were made at the same locality, it appears very probable they refer to the same individual.

In summary, the SBRC accepted the record on the basis of the following:

- White primary shafts, diagnostic of Kermadec (Herald has black shafts);
- Underwing mainly dark; white confined to basal two-thirds of primaries' inner webs (underwing whiter in Herald, including a pale strip inwards, slightly rear of centre);
- Rounded tail, characteristic of Kermadec (Herald has wedge-shaped tail);
- Mass within range for Kermadec (exceptional for Herald);
- Tarsus near average for Kermadec (too great for Herald);
- Folded wing within range for Kermadec (too great for Herald);
- Tail near average for Kermadec (too short for Herald; Kermadec is a short-tailed species despite being generally larger);
- Tarsus/proximal feet grey with bluish tinge, normal for intermediate-morph Kermadec (unknown in Herald).

Status and distribution

This is the first accepted record for Seychelles. Kermadec Petrel was once believed to breed exclusively in the South Pacific from Lord Howe Island east to Easter Island and some islands west of Chile (Carboneras 1992). More recently it was discovered breeding alongside Herald Petrel at Round Island, Mauritius (Brooke *et al.* 2000, Brooke 2004) and at Ilha da Trindade, Brazil (Imber 2004).

Acknowledgements

Thor Veen is thanked for help and advice to CS with the submission made to the SBRC and the preparation of this note. The SBRC are grateful for the assistance of Vincent Bretagnolle, Alan Burger, Carl Jones, Mike Imber, Tony Palliser, Peter Ryan, Ian Sinclair and Vikash Tatayah, all of whom acted as consultants to the committee to assist in the confirmation of this record. The members of the SBRC who assessed this record included Michael Betts, Ian Bullock, David Fisher, Ron Gerlach, John Phillips, Rob Lucking, Bob Scott and Adrian Skerrett. Mike Imber commented on a draft of this note.

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Lake Bedo—a little-known wetland hotspot in Madagascar

H. Glyn Young[a] and Felix Razafindrajao[b]

Lac Bedo—un point chaud peu connu à Madagascar. Le Lac Bedo (19°55'S 44°32'E), situé au centre-ouest de Madagascar, entre Belo-sur-Tsiribihina et Morondava, est peu connu par les ornithologues étrangers visitant le pays. Ce lac, qui s'étend sur environ 400 ha, est pourtant un site important pour des oiseaux d'eau, tels que cigognes, ibis, spatules, flamants, hérons, canards (la Sarcelle de Bernier *Anas bernieri* y est souvent présente) et limicoles. Les auteurs espèrent que l'intérêt ornithologique et l'accès facile au site attireront des visiteurs, qui sont invités à contribuer à une meilleure connaissance de l'avifaune en envoyant leurs observations à Madagascar@durrell.org.

Waterbirds are widespread in Madagascar and include representatives of 20 families of true waterbirds with 36 endemic taxa recognised (Young 2003). A typical itinerary of visiting birders includes some, usually small, wetlands, often adjacent to forest reserves. These sites are normally well known, frequently visited and may hold one or more endemics such as Madagascar Teal *Anas bernieri*, Meller's Duck *A. melleri*, Madagascar Plover *Charadrius thoracicus* or Slender-billed Flufftail *Sarothrura watersi*. Several larger wetlands, such as Lake Alaotra, are well known but rarely visited as they are difficult to reach and too large for easy searching. The majority of Madagascar's other large wetlands, however, are rarely visited by ornithologists and their waterbirds remain poorly known. Recent field work by local conservationists in western Madagascar has begun to show the importance of a series of saline lakes for a wide variety of waterbirds, in particular during the dry season. Of these lakes, those in Kirindy Mitea National Park, south of Belo sur Mer, and Lake Bedo, north of Morondava (Fig. 1), are of particular note. Whereas Kirindy Mitea remains very hard to get to, Lake Bedo (19°55'S 44°32'E) is very accessible and, being close to, but unseen from, the main Morondava to Belo-sur-Tsiribihina road, is on many visitors' routes—a fact that makes the poor knowledge of this wetland all the more surprising.

With this brief summary we hope that more birders will visit Lake Bedo and may in some way contribute to the economy of nearby villages, thus increasing local peoples' respect for the site and aiding researchers by sending in their records (to the authors at Madagascar@durrell.org).

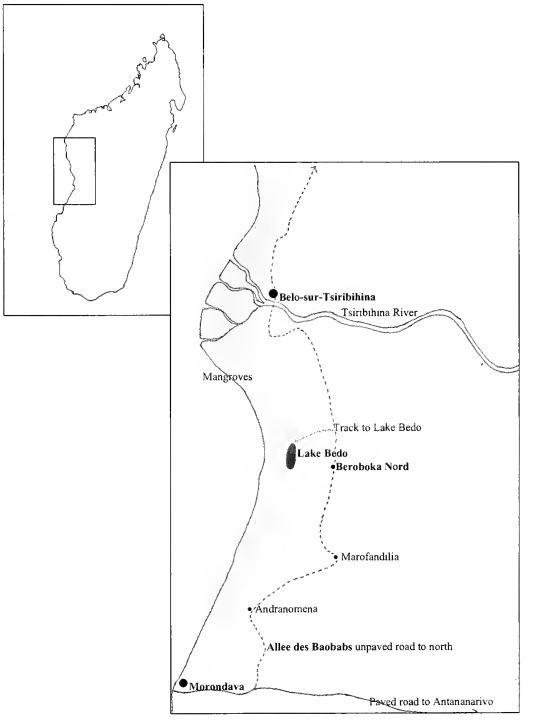

Figure 1. Location of Lake Bedo in western Madagascar.
Situation du Lac Bedo au centre-ouest de Madagascar.

Description of site

Lake Bedo is north-west of the village of Beroboka Nord at the southern end of an extensive area of tanne (the bare, salty, open ground on the landward side of coastal mangroves) that may be widely flooded during the wet season (January–March), and that stretches many miles

to the north. Areas within the tanne may be hyper-saline and salt-encrusted pools may develop (northern parts of this tanne have been extensively modified as a prawn farm). Lake Bedo, however, is filled partly by fresh water from the rains and is only slightly saline. This salinity affects the wetland's flora and rush (*Juncus*)-like vegetation predominates, and there are no water lilies *Nymphea* or beds of reed *Phragmites* or papyrus *Cyperus*. *Typha* marks freshwater channels and there are some areas of *Typha* marsh at the lake's ends. It is, however, this general salinity that prevents the conversion of the wetland to the rizculture that typifies so many of Madagascar's wetlands.

Historically, these southern limits of the tanne have not been fully mapped or adequately described. However, it is likely that they have changed extensively even in recent years: Otto Appert visited in June–July 1974 and described the area as the 'flooded area west of Beroboka' (Appert 1996) and Roger Safford in August 1993 found 'three small, seasonal pools (combined area of less than 1 ha)', and local guides were certain that no larger water areas existed at that time (Safford 1993 and *in litt.* 2005). Today the shallow lake occupies an area of *c.*400 ha, but the extent of open water may still be highly variable: in the height of the dry season, in September–November, it may occupy less than 100 ha in most years and in some it may dry out completely. The changeable nature of Bedo means that visitors in the future may, however, find a very different, but still highly important, wetland.

Extensive areas of flat, sparsely vegetated sand and dried mud border the open water for much of the year. Dry forest at the lake's western edge eventually joins the coastal mangrove. Baobab trees are common in the forest, as are lemurs, notably Verreaux's Sifaka *Propithecus verreauxi*.

The area was previously well known to duck hunters and, although not within a reserve, is included in the Important Bird Area 'Wetlands of the Tsiribihina delta and upper river' (Projet ZICOMA 1999, 2001).

Access

Lake Bedo is approached by driving off the main Morondava to Belo-sur-Tsiribihina road, the road famous at its southern end as the 'Allee des Baobabs'. A rough track to the lake goes through agricultural land, mostly grazing for cattle, and scrub before entering the dry forest bordering the eastern lake shore. The point where the track leaves the road is marked with a sign (which further informs visitors that hunting at the lake is forbidden), but the sign is not obvious and visitors are advised to stop in the roadside village of Beroboka Nord to ask for directions and, possibly, for a guide. The lake can be reached by foot through interesting scrub and forest from Beroboka, but it may be preferable to drive as the vehicle may make a good hide. The short drive along the forested track offers opportunities for watching scrubland and forest birds, particularly at dawn and dusk (see below). The lake can be watched from any one point on the shore. Drinks etc. can be readily purchased at several small local stores or restaurants (hotelys) in Beroboka Nord village.

Birds

Storks, ibises, flamingos and herons

The track comes out near the northern edge of the lake, where flocks of up to 200 African Spoonbills *Platalea alba* feed and may be joined by flamingos. The latter range widely in western Madagascar and numbers at the lake vary on an almost hourly basis: flocks of several hundred Greater Flamingos *Phoenicopterus roseus* in the morning may be replaced by equally large numbers of Lesser Flamingos *Phoeniconaias minor* by evening. Flocks may include both species and, in September and October 2004, recently fledged young whose origin is unknown (did they hatch in Madagascar or

Captions to photos on opposite page:

Figure 2. Lake Bedo turn-off, 16 October 2004 (H. Glyn Young)

Embranchement vers le Lac Bedo, 16 octobre 2004 (H. Glyn Young)

Figures 3–7. Lake Bedo, September/October 2004 (H. Glyn Young)

Lac Bedo, septembre/octobre 2004 (H. Glyn Young)

Figures 8–9. Lake Bedo from the air, June 2005 (Durrell Wildlife Conservation Trust)

Vue aérienne du Lac Bedo, juin 2005 (Durrell Wildlife Conservation Trust)

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migrate from East Africa? *P. minor* is not known to breed in Madagascar).

Large numbers of Glossy Ibises *Plegadis falcinellus* forage in the lake and roost at dusk after feeding in rice fields to the south. Yellow-billed Storks *Mycteria ibis* are often present and flocks of up to 50 have been seen, sometimes joined by African Openbill Storks *Anastomus lamelligerus*. Herons and egrets may be abundant, including flocks of several hundred Black Egrets *Egretta ardesiaca* and large numbers of Great Egrets *E. alba*. Up to 25 Madagascar Herons *Ardea humbloti* may be present throughout the lake. Black-crowned Night Heron *Nycticorax nycticorax*, Grey *Ardea cinerea,* Purple *A. purpurea*, Squacco *Ardeola ralloides* and Green-backed Herons *Butorides striatus* are common. Dimorphic Egret *Egretta dimorpha* is rarer but usually seen, and singles of Little Bittern *Ixobrychus minutus* and the migratory Madagascar Pond Heron *Ardeola idae* are occasionally present. Madagascar White Ibis *Threskiornis* (*aethiopicus*) *bernieri* has been recorded at Lake Bedo in the past (Appert 1996) and, whilst not recorded here in recent visits, is still a possibility.

Wildfowl

Wildfowl numbers at Bedo can be exceptional at some times of year, particularly in the dry season as lakes elsewhere dry out, with *Dendrocygna viduata* and Fulvous Whistling Ducks *D. bicolor*, Red-billed *Anas erythrorhyncha* and Hottentot Teals *A. hottentota* the most common. Knob-billed (Comb) Duck *Sarkidiornis melanotos* too is often seen, as is, strangely (as there are no water lilies) African Pygmy Goose *Nettapus auritus*, although the latter may simply be moving between more typical habitats. Madagascar Teal nests in the nearby mangroves and can be found at the lake edges, usually shunning the flocks of other wildfowl and normally remaining in pairs: up to 17 have been counted recently. Red-knobbed Coots *Fulica cristata* may be common in the dry season (flocks of over 200) and may occasionally be joined by both Little *Tachybaptus ruficollis* and Madagascar Grebes *T. pelzelnii*. White-backed Duck *Thalassornis leuconotus* has not yet been recorded at Lake Bedo but has been seen nearby in the Andranomena Special Reserve, and although a lily specialist, like the pygmy geese, this highly dispersive bird may too stop off at Bedo as it moves between more suitable sites.

Rails

Rails at Bedo are usually shy and rarely observed. The exception is the noisy and conspicuous Purple Swamphen *Porphyrio porphyrio* whose elephantine trumpetings can be heard even as the lake is approached. Common Moorhen *Gallinula chloropus* is widespread and common and White-throated Rail *Dryolimnas cuvieri* and Baillon's Crake *Porzana pusilla* are relatively easy to find but their status at the lake is unclear—check the *Typha* beds. Sakalava Rail *Amaurornis olivieri*, as yet unrecorded at Lake Bedo, is a possibility as it has been found at other west coast lakes.

Shorebirds

Black-winged Stilt *Himantopus himantopus* (96 were counted in December) often nests quite openly. The shores are frequented by large numbers of small plovers. Kittlitz's *Charadrius pecuarius*, White-fronted *C. marginatus* and the rare endemic Madagascar Plover *C. thoracicus* occupy the drier areas and nest at the lake, whereas Three-banded *C. tricollaris* and wintering Greater Ringed Plover *C. hiaticula* can be found in the wetter areas. Madagascar Pratincole *Glareola occularis* too is easy to see when migrants from East Africa arrive in September and October.

Greater Painted-snipe *Rostratula benghalensis* is common in the more vegetated areas of the lake shore, but may prove hard to find until dusk. In the northern winter large numbers of Common Greenshank *Tringa nebularia*, Curlew Sandpiper *Calidris ferruginea* (1,000+) and Common Sandpiper *Actitis hypoleucos* are present, and Grey Plover *Pluvialis apricaria* and Little Stint *C. minuta* have also been recorded.

Other birds

Whiskered Tern *Childonias hybrida* may be very common and be joined by smaller numbers of Caspian Tern *Sterna caspia.* Pink-backed Pelican *Pelecanus rufescens* has been seen three times recently (21 September 2003 and 18 November and 12 December 2004: Mwema & Razafindrajao 2006). Raptors, notably Yellow-billed Kite *Milvus migrans aegyptius*, are common and the migratory Eleanora's *Falco eleonorae* and Sooty Falcons *F. con-*

color feed at the lake. Several passerines are found around the lake amongst which Madagascar Swamp Warbler *Acrocephalus newtoni* is perhaps the most notable.

Forest and scrubland birds

The drive to the lake and the forest surrounding it contain several endemics. The kestrels on the dead palms should be checked, as at least one pair of Banded Kestrels *Falco zoniventris* occurs. Care must be taken not to run over coveys of Madagascar Buttonquails *Turnix nigricollis* that seem to like the track better than the surrounding land. Madagascar Nightjar *Caprimulgus madagascariensis* and Sickle-billed Vanga *Falculea palliata* are easily seen from the track.

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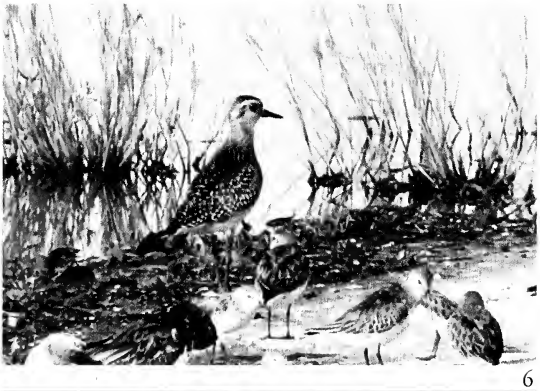

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Recent Reports

These are largely unconfirmed records published for interest only; **records are mostly from 2005, with a few from earlier dates.** We thank all birders who have sent in their records and urge them to submit full details to the relevant national or regional organisations. It is suggested that observations of each species be compared with relevant literature to set new data in context and that observers who are unfamiliar with the status of birds in a particular country refer to R. J. Dowsett's (1993) Afrotropical avifaunas: annotated country checklists (in: R. J. Dowsett & F. Dowsett-Lemaire. *A Contribution to the Distribution and Taxonomy of Afrotropical and Malagasy Birds.* Tauraco Res. Rep. 5. Liège: Tauraco Press) or more recent or appropriate sources before submitting records.

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Les observations ci-après sont en majeure partie non confirmées et sont publiées uniquement dans le but d'informer. **La plupart des données sont de 2005; quelques-unes sont plus anciennes.** Nous remercions tous les ornithologues qui ont pris la peine de nous faire parvenir leurs données et nous recommandons de les envoyer, dûment documentées, aux organisations nationales ou régionales concernées. Il est conseillé de vérifier le statut des espèces observées dans la littérature appropriée, afin de mettre les nouvelles données en perspective, et de consulter notamment R. J. Dowsett (1993) Afrotropical avifaunas: annotated country checklists (in: R. J. Dowsett & F. Dowsett-Lemaire. *A Contribution to the Distribution and Taxonomy of Afrotropical and Malagasy Birds.* Tauraco Res. Rep. 5. Liège: Tauraco Press) ou des sources plus récentes ou appropriées.

Angola

In October 2005, the first ABC conservation tour recorded 14 Angolan endemics and several range extensions. For a succinct report, see Club News pp.6–7.

Azores

The following records are from April–August 2005. On the Salvages, up to four **Red-billed Tropicbirds** *Phaethon aethereus* remained from 25 May until at least 15 June, and a pale-morph **Eleonora's Falcon** *Falco eleonorae* was seen on 10 June. An **American Coot** *Fulica americana* was at Furnas Lagoon, São Miguel, on 8–16 April at least. A **Bar-tailed Godwit** *Limosa lapponica* and a **Black-tailed Godwit** *L. limosa* were found at Cabo da Praia, Terceira, on 11 June. On Praia islet, Graciosa, an adult **Bridled Tern** *Sterna anaethetus* remained from mid May to early August. Other August reports included a **Lesser Yellowlegs** *Tringa flavipes* also there on 4th. A **Semipalmated Plover** *Charadrius semipalmatus* was observed at Cabo da Praia, Terceira, on 3 August. **Least Sandpipers** *Calidris minutilla* were at Capelinhos lighthouse, Faial, from 30 July to 2 August and at Cabo da Praia, Terceira, on 3 August. An adult and a pair of **Sooty Terns** *Sterna fuscata* were present on Ilhéu da Vila this year (reportedly, one chick hatched). On 4 August, a **Bridled Tern** was recorded at Ilhéu da Praia, Graciosa. Three **Common House Martins** *Delichon urbicum* were at Povoção, São Miguel, on 13 April, and a male **Black-eared Wheatear** *Oenanthe hispanica* was reported from the Salvages on 11 June.

An exceptional number of Nearctic vagrants was reported in September–November 2005, with more than ten potential first records, mostly on the westernmost islands of Corvo and Flores. A **Pied-billed Grebe** *Podilymbus podiceps* was at

Captions to figures on opposite page

Figure 1. Chimney Swift / Martinet ramoneur *Chaetura pelagica*, São Miguel, Azores, 28 October 2005 (Frédéric Jiguet)

Figure 2. Leach's Storm-petrel / Océanite culblanc *Oceanodroma leucorhoa*, off La Palma, Canary Islands, 6 October 2005 (Edwin Winkel)

Figures 3–4. Presumed South Polar Skua / présumé Labbe de McCormick *Stercorarius* (*Catharacta*) *maccormicki*, off La Palma, Canary Islands, 6 October 2005 (Edwin Winkel)

Figure 5. River Prinia / Prinia aquatique *Prinia fluviatilis*, Komadougou Yobé River, Diffa, Niger, 23 September 2005 (Flemming Jensen)

Figure 6. American Golden Plover / Pluvier bronzé *Pluvialis dominica*, Technopole, Dakar, Senegal, 29 October 2005 (Wouter Favyets)

Figure 7. American Wigeon / Canard d'Amérique *Anas americana*, Djoudj National Park, Senegal, 20 December 2005 (Amine Flitti)

Figure 8. Laughing Gull / Mouette atricille *Larus atricilla*, Siné Saloum, Senegal, 28 December 2005 (Amine Flitti)

Lagoa Azul, São Miguel, in the first half of November (presumably first seen at Lagoa Furnas on 27 October), with a second at Lagoa da Funda, Flores, on 9 November, and a report from Terceira, on 13 November. **Blue-winged Teals** *Anas discors* were reported from Cabo da Praia, Terceira (one), Lagoa Azul, São Miguel (two) and Flores (four). Other vagrant waterfowl included up to seven **Ring-necked Ducks** *Aythya collaris* and up to three **Lesser Scaup** *A. affinis* at Lagoa Azul, São Miguel, in the first half of November and, on Flores, a female **American Wigeon** *Anas americana* on 2 November, three **American Black Ducks** *A. rubripes* on 8 November, with one there on 18th, and three **Ring-necked Ducks** also on 18th.

American Bitterns *Botaurus lentiginosus* were found at Faja dos Cubres, São Jorge, on 21 September, on São Miguel on 27 October, and on Flores on 17 November. Up to four **Great White Egrets** *Egretta alba* of the race *egretta* were identified on São Miguel from 1 November and one was seen on Terceira on 4 November. A **Great Blue Heron** *Ardea herodias* stayed on Flores from 22 September to at least 21 November. An immature **Hen Harrier** *Circus cyaneus hudsonius* flew over Lagoa Rasa, Flores, on 8 November. A crake, at Praia da Vitoria, Terceira, from 19 October to 2 November, was not a Sora Rail *Porzana carolina* but proved to be the first **Spotted Crake** *P. parva* for the Azores since 1966. A **Killdeer** *Charadrius vociferus* was on Flores on 9–19 November at least. One or two **Least Sandpipers** were seen at Cabo da Praia, Terceira, on 20–22 September and from 25 October to at least 15 November. On Flores, a **Wilson's Snipe** *Gallinago gallinago delicata* was reported at Lagoa Rasa on 8 November. Three **Short-billed Dowitchers** *Limnodromus griseus* were seen at Cabo da Praia on 13–22 September and one was at Fajo dos Cubres, São Jorge, on 21 September. A (Hudsonian) **Whimbrel** *Numenius phaeopus hudsonicus* was reported from Flores and Corvo. An **Upland Sandpiper** *Bartramia longicauda* stayed on Flores from 30 October to at least 11 November and a **Solitary Sandpiper** *Tringa solitaria* was on Terceira on 16–22 September. A **Greater Yellowlegs** *T. melanoleuca* was observed on Flores on 30 October. Other waders in autumn 2005 included up to seven **Semipalmated Plovers** *Charadrius semipalmatus*, a few **American Golden Plovers** *Pluvialis dominica*, several **Semipalmated Sandpipers** *Calidris pusilla*, small groups of **White-rumped Sandpipers** *C. fuscicollis*, several **Pectoral Sandpipers** *C. melanotos*, a few **Buff-breasted Sandpipers** *Tryngites subruficollis*, three **Lesser Yellowlegs** *Tringa flavipes*, one **Solitary Sandpiper** *T. solitaria* and several **Spotted Sandpipers** *Actitis macularius*.

Up to four **Laughing Gulls** *Larus atricilla* were seen on Flores from 1 November, an adult was on Terceira on 4 November, and up to nine were counted at Ponta Delgada harbour on São Miguel from 7 November. First-winter **Franklin's Gulls** *L. pipixcan* were present on Terceira on 4–12 November at least, and on São Miguel on 13–18 November. This influx of Laughing and Franklin's Gulls was also recorded in Morocco and south-western Europe, with large numbers of the first-named species also reaching the British Isles. Two **American Herring Gulls** *L. argentatus smithsonianus* were identified on Flores on 17 November. A first-winter **Forster's Tern** *Sterna forsteri* was observed on Terceira on 30 October and 10 November. An **American Mourning Dove** *Zenaida macroura* on Corvo on 2 November was the first for the Azores. A **Yellow-billed Cuckoo** *Coccyzus americanus* was also seen on Corvo, on 19 October. A **Common Nighthawk** *Chordeiles minor* was reported from Faial on 6 November, with another on Terceira on 11 November. From 28 October to 7 November, *c.*150 **Chimney Swifts** *Chaetura pelagica* were recorded, from Corvo (up to 27) and Flores (up to 21) to Faial (12), Terceira (up to 14) and São Miguel (up to 30); see Fig. 1.

Tree Swallows *Tachycineta bicolor* were seen at Sete Cidades, São Miguel, on 26–27 October (one) and 2 November (two), on Corvo on 5–6 November (one) and at Punta Lopo Vaz, Flores, on 2 November (two). The latter were accompanied by an **American Barn Swallow** *Hirundo rustica erythrogaster*. The first American Barn Swallow for the Azores was a juvenile at Ponta Delgada, Flores, on 30–31 October. An **American Cliff Swallow** *Hirundo pyrrhonota* on Corvo on 5 November was the second for the islands. The first and second **American Buff-bellied Pipits** *Anthus rubescens rubescens* for the Azores were on Corvo on 29 October and at Cabo da Praia, Terceira, on 2–3 November. A **Grey-cheeked Thrush** *Catharus minimus* was found on Corvo on 1 November. A **White-eyed Vireo** *Vireo griseus* on Corvo on 22 October was another first, not only for the archipelago but for the Western Palearctic. Also on Corvo, a **Red-eyed Vireo** *V. olivaceus* was present on 26–28 October and a **Philadelphia Vireo** *V. philadelphicus* on 26 October. If accepted, a male **Common Crossbill** *Loxia curvirostra* at Pico da Vara, São Miguel, on 18 September will also be a first record for the Azores. A **Myrtle (Yellow-rumped) Warbler** *Dendroica coronata* on São Miguel on 21 November was the second for the islands. More firsts for the Azores, all from Corvo, included a first-winter **Black-throated Blue Warbler** *D. caerulescens* from 24 October to 1 November at least, an adult male **Hooded Warbler** *Wilsonia citrina* on 26–27 October, an **Arctic Redpoll** *Carduelis hornemanni* on 20 October, a first-winter **Scarlet Tanager** *Piranga olivacea* on 29 October and 5 November, a **Lapland Longspur** *Calcarius lapponicus* on 28 October, and up to seven **Indigo Buntings** *Passerina cyanea* on 24–27 October, with three on Flores on 1 November and one on 3–9 November. Other Nearctic vagrants on Corvo included an **Ovenbird** *Seiurus aurocapilla* on 1 November, a **White-crowned Sparrow** *Zonotrichia leucophrys* on 25–27 October, a first-winter **Rose-**

breasted Grosbeak *Pheucticus ludovicianus* from 24 October to 9 November at least (with another at Lagoa Lomba, Flores, on 19 November), two **Bobolinks** *Dolichonyx oryzivorus* on 19–24 October, and an immature **Baltimore Oriole** *Icterus galbula* on 6 November (per *Birding World* 18: 200, 240, 324 & 377, 434, 455–456 & 465–478; per *Dutch Birding* 27: 349–350 & 413–425).

Benin

Belated reports from August–October 2003 include the following. A **Dwarf Bittern** *Ixobrychus sturmii* flew over the university at Calavi on 4 August, one was at the Kota waterfalls on 9 October, and several were near Malanville on the shores of the River Niger on 11–13 October. An **Ahanta Francolin** *Francolinus ahantensis* was seen between the villages of Hlagba Dénou and Démé on 16 September. **Lesser Moorhen** *Gallinula angulata* was seen a few times near Malanville on 11–13 October. A few **Caspian Terns** *Sterna caspia* were at Djacquot beach on 27 August and two were at Ouidah on 24 October. **Rosy Bee-eater** *Merops malimbicus* was found to be common near the village of Lokoli. Two **Speckled Tinkerbirds** *Pogoniulus scolopaceus* were observed in the southern part of the forest of Lokoli on 8 September, and one in the northern part on 30 September. Other records from Lokoli include a **Red-winged Warbler** *Heliolais erythropterus*, a pair of **Buff-throated Apalises** *Apalis rufogularis* on 2 October, a **Red-bellied Paradise Flycatcher** *Terpsiphone rufiventer* on 26 September, and a male **Buff-throated Sunbird** *Chalcomitra adelberti* seen well on 1 September. A male **Marsh Tchagra** *Antichromus minutus* with a begging juvenile Black Cuckoo *Cuculus clamosus* was observed near Lokoli on 3 September. **Grosbeak Weavers** *Amblyospiza albifrons* were seen a few times at Lokoli and a small flock was at the edge of the forest near Démé. Two **Grey-headed Negrofinches** *Nigrita canicapillus* were near Lokoli on 25 September (*SF*).

More belated reports include **African Openbill Storks** *Anastomus lamelligerus*, found to be common in and around Cotonou and Ganvié in October 2004, a **Lesser Kestrel** *Falco naumanni* seen in Cotonou on 20 March 1999, a **Purple Swamphen** *Porphyrio porphyrio* at Bymin, near Porto Novo, also in March 1999, and a **Fire-crested Alethe** *Alethe diademata*, apparently the first for Benin, recorded on 27 March 1999 (*JG*).

Botswana

Records from the period January 2005–January 2006 include the following. There was a high count of 166 **Great Crested Grebes** *Podiceps cristatus* at Bokaa Dam, in the south-east, on 24 July. At Letsibogo Dam, in eastern Botswana, there was an exceptional count of 450 **Great Cormorants** *Phalacrocorax carbo* on 1 July. Counts at just eight roosts in the Okavango Delta in July–August produced over 1,200 **Slaty Egrets** *Egretta vinaceigula* or dark egrets, presumed to be Slaty Egrets (and not Black Herons *E. ardesiaca*), the majority of these at just four roosts. On 1–2 July, 23 **Pink-backed Pelicans** *Pelecanus rufescens* were seen at Letsibogo Dam; six nests were occupied. At a 'heronry' on islands in Lediba la Dinonyane near Kananain in the Okavango Delta, 33 **Pink-backed Pelican** nests were counted on 13 September, with adults incubating on most. There were also 20 nests of **Marabou Storks** *Leptoptilos crumeniferus* and 592 nests of **African Openbill Storks** *Anastomosus lamelligerus*. One **Black Stork** *Ciconia nigra* was seen on the Thamalakane River in Maun on 23 April and three along the Tati River at Francistown on 11 February.

An estimated 10,000–12,000 **Lesser Flamingos** *Phoeniconaias minor* were nesting on Sua Pan in late January 2005. On 2 March, some 5,000–10,000 birds were still there, seen from Thlapama Hill near Mea Pan. Apart from small numbers of Lesser Flamingos at dams and sewage ponds in east and south-east Botswana, there were *c.*300 at Bokaa Dam on 3 December and *c.*400 at Lake Ngami in mid December, plus 330 **Greater Flamingos** *Phoenicopterus* (*ruber*) *roseus*.

A young **Cape Vulture** *Gyps coprotheres*, fitted with a satellite-tracking device at Waterberg, Namibia, spent two weeks in the western part of the Okavango Delta in mid 2005 (per *Raptors Namibia Newsletter* 4 June 2005).

Lake Ngami, in north-west Botswana, flooded for the second consecutive year. On 26 July and 7 August there were 33 and 46 **White Storks** *Ciconia ciconia*, respectively. These were presumably European birds staying on. In September there was a single **Whimbrel** *Numenius phaeopus*. In mid December, when the lake was drying, there were 750 **Great White Pelicans** *Pelecanus onocrotalus*, 67 **Pink-backed Pelicans**, flamingos (see above), many waterfowl including 6,400 **Red-billed Teal** *Anas erythrorhyncha*, an **Osprey** *Pandion haliaetus*, *c.*15 **Lesser Kestrels** *Falco naumanni*, 1,000 **Black-winged Pratincoles** *Glareola nordmanni*, 30 **Common Ringed Plovers** *Charadrius hiaticula*, 60 **Caspian Plovers** *C. asiaticus*, five **Grey Plovers** *Pluvialis squatarola* and 12 **Black-tailed Godwits** *Limosa limosa*.

Two **Corncrakes** *Crex crex* were ringed in Maun at the start of December. Two **Grey Crowned Cranes** *Balearica pavonina* were near Maya Pan, in Moremi Game Reserve, on 21 May and one was south-east of Mmatshumo, in 2125B4, in September 2005. About 300 **Chestnut-banded Plovers** *Charadrius pallidus*, two **Greater Sand Plovers** *C. leschenaultii*, a **Grey Plover**, four **Sanderling** *Calidris alba* and a **Eurasian Curlew** *Numenius arquata* were at the drying edge of Sua Pan and in dying pools in the River Nata, in the Nata Delta, on 12 August. At Bokaa Dam there was a **Black-tailed Godwit** on 25 September and three **Grey Plovers** and two **Black-winged Pratincoles** on 3 December (*ST; HB, NBo, CBr, UF, PH, RH, GM, ZM, MM* per *ST*).

Cameroon

Twenty-six **White-faced Whistling Ducks** *Dendrocygna viduata* were counted in Bamenda town on 12 November 2005 (*JvdW*). A surprise find was a **Secretary Bird** *Sagittarius serpentarius* at the Tiko Golf Club, between Douala and Limbe, on 12 August and 27 September (*HvdL*). Flocks of **Grey-headed Gulls** *Larus cirrocephalus* were seen at Lake Lagdo, near Garoua in the north, in the first half of December 2005 (*JG*).

Canary Islands

Records from pelagic trips off Puerto Rico, Gran Canaria, on 10–14 May 2005 included ten **Bulwer's Petrels** *Bulweria bulwerii*, three **Wilson's Storm-petrels** *Oceanites oceanicus*, 11 **White-faced Storm-petrels** *Pelagodroma marina*, four **Madeiran Storm-petrels** *Oceanodroma castro*, a **Red-billed Tropicbird** *Phaethon aethereus* and six **Roseate Terns** *Sterna dougallii* (per *Birding World* 18: 200; per *Dutch Birding* 27: 274).

Noteworthy records from July–December 2005 include the following. An adult **Red-billed Tropicbird** was seen close inshore off Roque Grande, El Hierro, on 9 July, and an adult **Roseate Tern** was off Tazacorte, La Palma, on 17 July (per *Birding World* 18: 281; per *Dutch Birding* 27: 346). A **Leach's Storm-petrel** *Oceanodroma leucorhoa* was photographed 1 mile off Tazacorte, La Palma, on 6 October (*EW*; Fig. 2).

A few **Common Shelduck** *Tadorna tadorna*, **Tufted Duck** *Aythya fuligula* and a female **Pintail** *Anas acuta* were on a pond by La Lajita, Fuerteventura, on 28 August; although they appeared to be wild these records are rather early in the year and the birds perhaps had escaped from a nearby zoo (*PL & DR*). A male **Ring-necked Duck** *Aythya collaris* was at Catalina García, Fuerteventura, on 10 October (per *Birding World* 18: 434). Two female **Greater Scaup** *A. marila* were at Salinas del Janubio lagoon on 16 November (*NS*). A female **Common Scoter** *Melanitta nigra* was at Valle Molina Reservoir, Tenerife, on 26 December (*KT*). On Fuerteventura, an **Eleonora's Falcon** *Falco eleonorae* flew over Corralejo on 27 August, and a **Peregrine Falcon** *F. peregrinus* was seen near the lighthouse at El Cotillo on 30 August (*PL & DR*).

A **White-rumped Sandpiper** *Calidris fuscicollis* was reported from Salinas del Carmen, Fuerteventura, on 20–22 October (per *Birding World* 18: 434). A **Spotted Sandpiper** *Actitis macularius* was near Puerto de la Cruz, Tenerife, on 30 October. A presumed **South Polar Skua** *Stercorarius* (*Catharacta*) *maccormicki* photographed 2 miles off La Palma on 6 October may be the first for the Canaries if accepted; the skua's outer primary was in growth, indicating moult, which in late summer is strong indication of Southern Hemisphere origin (*EW*; per *Dutch Birding* 27: 404–424; Figs. 3–4).

Two **Chimney Swifts** *Chaetura pelagica* were on Tenerife on 29–31 October and five on Lanzarote on 1 November (per *Dutch Birding* 27: 404–424). A small 'fall' of migrants on 4 September on the Jandia Peninsula, Fuerteventura, included several **Olivaceous Warblers** *Hippolais pallida* and two **Melodious Warblers** *H. polyglotta*; on Lanzarote several Melodious Warblers were also reported next day (*PL & DR*). The **Northern Mockingbird** *Mimus polyglottos* at Arguineguin, Gran Canaria, was still present on 3 October; it was first reported in November 2004 (*cf. Bull. ABC* 12: 179). A juvenile **Common Rosefinch** *Carpodacus erythrinus* was claimed from Alegranza, Lanzarote, on 1 October; if accepted, it will be the first for the Canary Islands (per *Dutch Birding* 27: 404–424).

Cape Verde Islands

Records from October–November 2005 include the following. The first **Snowy Egret** *Egretta thula* for the archipelago was at the sewage ponds near Mindelo, São Vicente, on 1–3 November. On 31 October, 46 **Cape Verde Purple Herons** *Ardea* (*purpurea*) *bournei*, including 26 juveniles, were counted at the species' only nesting tree, at Liberoa, Santiago. Also on Santiago, a **Glossy Ibis** *Plegadis falcinellus* was seen on 30 October. A first-winter **Semipalmated Plover** *Charadrius semipalmatus* was found at Tarrafal, Santiago, on 30 October. Other vagrant waders at the sewage ponds of Mindelo, São Vicente, on 1–3 November, included a first-winter **Semipalmated Plover**, an **American Golden Plover** *Pluvialis dominica*, three **Semipalmated Sandpipers** *Calidris pusilla*, three **White-rumped Sandpipers** *C. fuscicollis*, a **Green Sandpiper** *Tringa ochropus* and a **Spotted Sandpiper** *Actitis macularius* (per *Dutch Birding* 27: 404–408). At Praia, Santiago, a **White-rumped Sandpiper** and a **Spotted Sandpiper** were seen on 31 October, with another **White-rumped Sandpiper** at Santa Maria, Sal, on 5 November (per *Birding World* 18: 456–457).

The captive **Barn Owl** *Tyto alba* taken as a chick on Maio in 2004 was not the first for the island, as erroneously stated in a previous Recent Reports (*Bull. ABC* 12: 180): the first published record was indeed made in October 2000, but breeding had already been recorded in March that year by another observer and was eventually published (*RB*). Two **Greater Hoopoe Larks** *Alaemon alaudipes* were discovered on Sal on 5 November; the species is only known as a breeder on Boavista and Maio (per *Dutch Birding* 27: 404–408).

Greater Hoopoe Lark *Alaemon alaudipes* (Pete Leonard)

Central African Republic

The following records, from the period May 2005–January 2006, are from around the village of Djoubissi, *c.*70 km north of Bambari, Ouaka prefecture, in the centre of the country. Additions to the country list are **Alpine Swift** *Tachymarptis melba*, observed on 15 May, and **Isabelline Wheatear** *Oenanthe isabellina*, seen on 13–14 November, whereas **Great Snipe** *Gallinago media*, found on 14 September, and **White Wagtail** *Motacilla alba*, remaining during 4–14 November and 29 November–9 January at least, are rarely recorded vagrants.

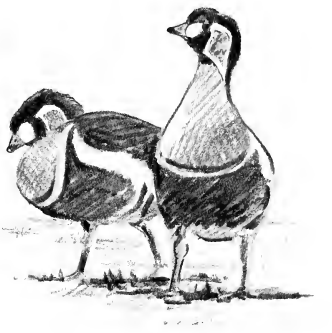
Other interesting records, compared to the known distribution of these species (*cf.* maps in Borrow & Demey, 2004, *Field Guide to the Birds of Western Africa*) include the following (records are of single birds, unless otherwise indicated): **Saddle-billed Stork** *Ephippiorhynchus senegalensis* (15 July), **Common Quail** *Coturnix coturnix* (8 December), **Spotted Thick-knee** *Burhinus capensis* (7 May), **Ross's Turaco** *Musophaga rossae* (28 December and 6 January), **Pallid Swift** *Apus pallidus* (20 on 22 November and 150 on 29 November), **Black-headed Bee-eater** *Merops breweri* (two on 23 December and 2 January), **Speckled Tinkerbird** *Pogoniulus scolopaceus* (11 November), **Speckle-breasted Woodpecker** *Dendropicos poecilolaemus* (two on 8 May, one on 12 November), **Grey-rumped Swallow** *Pseudhirundo griseopyga* (multiple records), **White-throated Blue Swallow** *Hirundo nigrita* (two on 29 July), **Ansorge's Greenbul** *Andropadus ansorgei* (11 November, at least four on 1 December), **Common Redstart** *Phoenicurus phoenicurus* (multiple records, including five on 31 October), **Common Rock Thrush** *Monticola saxatilis* (2 January), **Foxy Cisticola** *Cisticola troglodytes* (2 January), **Buff-throated Apalis** *Apalis rufogularis* (two on 11 November, one on 1 December), **Shrike Flycatcher** *Megabyas flammulatus* (two on 11 November and 1 December), **Brown-crowned Tchagra** *Tchagra australis* (5 May), **Purple Glossy Starling** *Lamprotornis purpureus* (multiple records), **Heuglin's Masked Weaver** *Ploceus heuglini* (multiple records, including a breeding pair), **Compact Weaver** *Pachyphantes superciliosus* (two on 22 May) and **Brown-rumped Bunting** *Emberiza affinis* (2 January) (*NV*).

Congo-Brazzaville

Records from April–October 2005 include the following. A female **Red-footed Falcon** *Falco vespertinus* was seen in Lac Tele Community Reserve in early October (*HR*). A **Helmeted Guineafowl** *Numida meleagris* was killed at Tchissinga, near Diosso north of Pointe-Noire, in April; apparently the species is quite regularly caught in semi-forested hills along the coast (*TD*). In Brazzaville, **Common Kestrel** *Falco tinnunculus* was recorded breeding in August and **Ring-necked Dove** *Streptopelia capicola* was calling in April. In Lac Tele Community Reserve, an **African Grass Owl** *Tyto capensis* was seen in July and more than 850 **Rosy Bee-eaters** *Merops malimbicus* were found breeding in at least two colonies. Four Palearctic migrants, **Eurasian Marsh Harrier** *Circus aeruginosus*, **Great Snipe** *Gallinago media*, **Green Sandpiper** *Tringa ochropus* and **Barn Swallow** *Hirundo rustica*, were observed in the savanna on 5 September, which is rather early. **Weyn's Weaver** *Ploceus weynsi* was seen again on a few occasions (*HR*).

Egypt

Records from the period September 2005–January 2006 include the following. An adult **Goliath Heron** *Ardea goliath* and a first-winter **Lesser Sand Plover** *Charadrius mongolus* were at Wadi Lahami on 6 November (per *Birding World* 18: 457). Twenty **Red-breasted Geese** *Branta ruficollis* were observed from a cruise boat on the Nile at Esna, in late November (*AM*). At Ain Sukhna, an adult **Greater Spotted Eagle** *Aquila clanga* was seen on 30 December and 2–4 January, and an immature and four adult **Steppe Eagles** *A. nipalensis* on 2 January (*DRo*). At least 29 **Lappet-faced Vultures** *Torgos tracheliotus* were



Red-breasted Geese *Branta ruficollis* (Pete Leonard)

counted at Ber Shalatan on 18 September. A **Demoiselle Crane** *Anthropoides virgo* was seen in a flock of 130 Common Cranes *Grus grus* at Hurghada on 10 October. A female **Namaqua Dove** *Oena capensis* was photographed at Wadi Gama on 19 October (per *Dutch Birding* 27: 404–408). The latter species was also reported from Hurghada airport during October (per *Birding World* 18: 434). A **Red-tailed Wheatear** *Oenanthe xanthoprymna* was observed at Giza pyramids on 16 November (per *Birding World* 18: 457).

Ethiopia

In December 2005 the following species were reported. A pair of **White-backed Duck** *Thalassornis leuconotus* with seven young was observed at Lake Chelekleka on 2nd. A **Western Banded Snake Eagle** *Circaetus cinerascens* was at Lake Langano on 8th and two were at Wadera Forest, near Kibre Mengist, on 16th. A juvenile **Eastern Imperial Eagle** *Aquila heliaca* was at Lake Langano on 9th. Three **Degodi Larks** *Mirafra degodiensis* were claimed from Bogol Mayo on 18th, and six **Sidamo Larks** *Heteromirafra sidamoensis* from the Liben Plains, Negele, on 16th. A **Golden Pipit** *Tmetothylacus tenellus* was seen near Negele on 16th and a **Philippa's Crombec** *Sylvietta philippae* near Bogol Mayo, on 18th (*EF*). Two female or first-year **Ménétries Warblers** *Sylvia mystacea* were found at Lalibella on 18 November 2004 (*BP*).

Gabon

A **White Stork** *Ciconia ciconia* was seen near Port Gentil in November 2005 (*EdB*). A remarkable record is that of two males and a female **Pennant-winged Nightjar** *Macrodipteryx vexillarius* captured on video as they were flying around an oil platform, 10 miles west of Pointe Iguele, on the Gabon coast, at 02°35'S, in mid-July 2005 (*PM*).

The Gambia

Records from July–December 2005 include the following. A group of 25 **Wilson's Storm-petrels** *Oceanites oceanicus*, encountered *c.*25 miles off the Gambian coast at 13°30'N 17°02'W on 2 July, is the largest group recorded in Gambian waters in recent years (*CB & MGr*). A juvenile **Dwarf Bittern** *Ixobrychus sturmii* at a seasonal pond in Sao Forest Park, on the north bank in Central River Division (CRD), was well watched and photographed on 7 October; this is a rare bird in The Gambia (*PF & CB*). A young **Helmeted Guineafowl** *Numida meleagris* killed on the road and collected 10 km west of N'Jau, CRD, on 8 October, is the first proof of breeding in that Division. At Kaur, CRD, a record 107 **White-headed Lapwings** *Vanellus albiceps* were counted on 8 October. At the same site, *c.*2,000 **Collared Pratincoles** *Glareola pratincola* roosted on 5 October (*CB*). In December, a **Greater Sand Plover** *Charadrius leschenaultii* was found at Palm Grove lagoon, Banjul, on 12th and an **American Golden Plover** *Pluvialis dominica* at Cape Creek, near Banjul, on 4th (*DL* per *CB*). Several calling **Adamawa Turtle Doves** *Streptopelia hypopyrrha* were at Kunkilling and Tankandama Eco-Trails, CRD, on 15 December (*CB*).

Ghana

Two **American Golden Plovers** *Pluvialis dominica* were in rice fields *c.*50 km east of Accra on 12–13 November 2005 (*AH, HF & CP*). A **Red-necked Phalarope** *Phalaropus lobatus* was at the Panbros Salt Works, outside Accra, on 15 January 2006 (*AH, HF & PS*). At Sakumo Lagoon, a **Black Noddy** *Anous minutus* was discovered in a roost of a few thousand terns *Sterna* spp. and three African Skimmers *Rynchops flavirostris* on 9 July 2005, and was still there on 11th (*AH*). A **Common Chiffchaff** *Phylloscopus collybita* was seen in Mole National Park on 16 January 2006 and three **Common Waxbills** *Estrilda astrild* were observed in Accra on 9th (*RCr*).

A belated and intriguing report was received of an adult male **Wattled Starling** *Creatophora cinerea* in non-breeding plumage, seen at Dansoman, Accra, from a distance of 15–20 m, around 1 July 2003 (*SHo*).

Guinea

A **Yellow-casqued Hornbill** *Ceratogymna elata* was seen in Conakry's botanic garden on 15 March 2005; a rather surprise find of this species in a very small patch of forest in the centre of a busy city (*BP*).

Kenya

The following records are from May–October 2005, unless otherwise stated. A **Little Bittern** *Ixobrychus minutus* was at Nguuni Wildlife Sanctuary, Mombasa, on 28 July. Nine **Madagascar Pond Herons** *Ardeola idae* were observed in the Mara on 4 July and one near the Carnivore Restaurant, Nairobi, on 3 August. Two **White Storks** *Ciconia ciconia* were near Nakuru on 2 July. A group of 75 **African Open-billed Storks** *Anastomus lamelligerus* in the Mara on 4 July is a large concentration for this site. A **Eurasian Honey Buzzard** *Pernis apivorus* was at Kakamega on 19 July; sightings outside October–April are rare. **Montagu's Harriers** *Circus pygargus* were recorded at Kitengela, near Nairobi, on 23 June (a subadult male), at Amboseli on 24 June (an adult male and female) and at Naro Moru on 30 June (a female). A young female **Eurasian Marsh Harrier** *C. aeruginosus* was in Amboseli on 24 June and another in the Mara on 5 July. A **Lizard Buzzard** *Kaupifalco monogrammicus* was in Nairobi, where it is uncommon, on 20 July. A **Long-legged Buzzard** *Buteo rufinus* was reported from Mundui, Naivasha, around 20 October, and a **Grey Kestrel** *Falco ardosiaceus* from the Marigat area on 8 July.

An exhausted **Corncrake** *Crex crex* was rescued from a cat at Watamu on 21 September, but later died; this is the first—and an early—record of southward migration on the coast. Possibly the first **Shelley's Francolin** *Francolinus shelleyi* for the Mara was noted on 5 July. A **Stone Partridge** *Ptilopachus petrosus* between Kalacha and Loiyangalani, on 25 April, was at the north-eastern edge of this uncommon species' range. Four **Lesser Jacanas** *Microparra capensis* were found on a pond near Kipsaos shopping centre, Eldama Ravine–Eldoret road, on 20 October. About 20 **Black-tailed Godwits** *Limosa limosa* were at Lake Naivasha on 25 June; a high number for this late date. A **Marsh Sandpiper** *Tringa stagnatilis* and a **Wood Sandpiper** *T. glareola* at Nakuru on 2 July were possibly early-returning migrants. A **Common Sandpiper** *Actitis hypoleucos* at Amboseli on 24 June represents an unusual date. A dark-morph **Pomarine Skua** *Stercorarius pomarinus* was reported from Lake Naivasha on 20 September; there are fewer than 20 records of this species for Kenya. About 1,100 pairs of **Roseate Terns** *Sterna dougallii* bred on Whale Island, Watamu, in July–September, together with *c.*20–30 pairs of **Sooty Terns** *S. fuscata* (one juvenile Sooty was the first confirmed breeding success for this species here); 66 Roseate pulli and one adult were ringed. On the Sabaki River estuary, 44 **Brown Noddies** *Anous stolidus* were counted on 4 June and 49 on 16 September; this species is rare inshore and these numbers are particularly unusual; a pair possibly bred on Whale Island, Watamu, in July–September. In Kakamega Forest, 23 **Grey Parrots** *Psittacus erithacus* were recorded on 8 October; ten years ago this species was thought to be extinct at the locality. On 17 September, a **Great Spotted Cuckoo** *Clamator glandarius* was reported near Mt Suswa, Rift

Grey-crested Helmet-shrike *Prionops poliolophus* (Pete Leonard)

Valley, whilst **European Bee-eaters** *Merops apiaster* were seen in Nairobi. A **Grey-throated Barbet** *Gymnobucco bonapartei* at Molo on 3 July was far to the east for this species.

A pair of **Zanzibar Sombre Greenbuls** *Andropadus importunis* was found breeding at Karura Forest, on the edge of Nairobi, on 18 May; this species is very uncommon around the capital. A female **Northern Wheatear** *Oenanthe oenanthe* at Eremito Gate, Amboseli, on 25 June is an unusual date for this species and a **Pied Wheatear** *Oe. pleschanka* in Ngong Hills on 9 September is an early record. Two **Spotted Ground Thrushes** *Zoothera guttata* were ringed at Gede Ruins on 6 October; a further two were found at a new site on the northern edge of Arabuko-Sokoke Forest on 29 October. A pair of **Karamoja Apalises** *Apalis karamojae* sighted in the Mara on 6 July was probably the same pair as previously observed (still to be accepted as the first for Kenya by the East African Rarities Committee). Six **Hinde's Babblers** *Turdoides hindei* occurred by the Nyeri road, at the Tana River bridge, on 23 July; the species was also recorded breeding at Wajee Camp, Mukurweini, on 16 August. At the Oserian Wildlife Sanctuary, 16 **Grey-crested Helmet-shrikes** *Prionops poliolophus* were seen on 1 August. An **Olive Sunbird** *Cyanomitra olivacea* ringed on 10 September at A Rocha Kenya property, Karen, is the first record for Nairobi (per *CJ*). Three **Abbott's Starlings** *Pholia femoralis*, together with Sharpe's *Ph. sharpii,* Kenrick's *Poeoptera kenricki* and Waller's Starlings *Onychognathus walleri*, were observed at Mountain Lodge on 28 June (per *CJ*), with two also there in October and two more in Kieni Forest in the same month (*BM*); an adult male seen feeding young at a nest in Gatamaiyu Forest on 20 and 22 October is the first confirmed breeding record in Kenya (per *CJ; BP, CK*).

Liberia

During field work in three National Forests, North Lorma in the north-west, Gola in the west and Grebo in the east, from 19 November to 11 December 2005, some noteworthy records were made. **Olive Ibis** *Bostrychia olivacea* was found in North Lorma; the species is not mentioned for the Wologizi area by Gatter (1997, *Birds of Liberia*). A **Spot-breasted Ibis** *Bostrychia rara* flew over the village of Jalipo, Grebo, on 7 and 11 December. A melanistic **Black Sparrowhawk** *Accipiter melanoleucus* was seen in Gola; although this is a widespread forest resident in Liberia, it had not previously been recorded at this site. A **Lanner Falcon** *Falco biarmicus* was seen at Monrovia on 14 December; this species is mapped only for the north of the country by Gatter (1997). Two groups of **White-breasted Guineafowl** *Agelastes meleagrides* were encountered in Grebo Forest. Also in Grebo, **Black-collared Lovebird** *Agapornis swindernianus* was observed at two locations; Gatter (1997) mentions that it is a very rare or extinct resident in Liberia. Gola and Grebo constituted new localities for **Cassin's Honeybird** *Prodotiscus insignis*, whereas **Yellow-footed Honeyguide** *Melignomon eisentrauti* was recorded at North Lorma. A male **Cardinal Woodpecker** *Dendropicos fuscescens* was seen well at Voinjama on 26 November; only one previous record, from 1984 near Bawomai, is mentioned by Gatter (1997).

Up to 25 **Fanti Saw-wings** *Psalidoprocne obscura*, four **Lesser Striped Swallows** *Hirundo abyssinica*, a pair of **Plain-backed Pipits** *Anthus leucophrys* and a **Black-winged Oriole** *Oriolus nigripennis* were observed at Fishtown, near Grebo, on 11–12 December; these species were not previously mapped for the area. A colony of **Preuss's Cliff Swallows** *Hirundo preussi* numbering *c.*100 nests was found at Voinjama; this species is said to be a rare (dry-season?) visitor by Gatter (1997). A **Western Wattled Cuckoo-shrike** *Lobotos lobatus* was seen within a mixed-species flock in Grebo. A singing **Blue-shouldered Robin Chat** *Cossypha cyanocampter* observed near Jalipo, Grebo, on 11 December, with another at Fishtown the next day, were not previously mapped for the area. A pair of **Black-headed Rufous Warblers** *Bathmocercus cerviniventris* was found near a small stream at Luyema, North Lorma. Up to three **Western Olivaceous Warblers** *Hippolais* (*pallida*) *opaca* were observed in detail in a clearing at Gola, on 27 November–3 December; this is a new locality for this Palearctic migrant, for which there are apparently only two previous records. In the same clearing, a pair of **Short-winged Cisticolas** *Cisticola brachypterus* was singing; this species was apparently known only from coastal and northern savannas. **Black-capped Apalis** *Apalis nigriceps* was common in Grebo, which constitutes a new locality, and five singing **Nimba Flycatchers** *Melaenornis annamarulae* were also found there. A singing **Grey-throated Flycatcher** *Myioparus griseigularis* was seen at Gola and another at Jalipo, Grebo; this species was previously recorded only from Yekapa/Nimba. **Lead-coloured Flycatcher** *M. plumbeus* was found singing at Luyema and in a nearby clearing, North Lorma, on 19 November, and in a clearing in Gola on 27 November–3 December; the only records mentioned by Gatter (1997) are two collected in 1891 near Monrovia. In Gola, a pair of **Bioko**

Batises *Batis poensis* was observed at their nest, which contained two feathered nestlings on 3 December; this is a new locality for this species, of which very few nests have ever been found. A large rock with 20 nests of **Yellow-headed Picathartes** *Picathartes gymnocephalus* was located inside Grebo Forest. A single and a pair of **Lagden's Bush-shrikes** *Malaconotus lagdeni* were observed in mixed bird parties in Grebo. Two pairs of the Endangered **Gola Malimbe** *Malimbus ballmanni*, each with a juvenile, were foraging with mixed-species flocks in Gola Forest (*RD, FM, ES & KD*).

Libya

During a visit to Libya from 1 to 29 April 2005 the following notable records were logged. In Tripolitania, a flock of 12 **Glossy Ibis** *Plegadis falcinellus* flew over Gharyan at dusk on 2nd. A strong northerly passage of harriers *Circus* spp. was observed north of the Gebel Nafusa both at the start and the end of the month, with **Montagu's Harrier** *C. pygargus* seeming to predominate. During a trip offshore from Bukamash to Farwa Island on 28th, seven **Common Cranes** *Grus grus* were seen wading in the sandy shallows at the western end of the island, close to the Tunisian border. A **Wryneck** *Jynx torquilla* was at Abugrin on 20th.

In the Fezzan, in the south-west, a **Common Kestrel** *Falco tinnunculus* was seen at Mavo Lake on 14th. **Laughing Doves** *Streptopelia senegalensis* were common in Ghat, Germa and at Ubari lakes on 10–16th. A **Tristram's Warbler** *Sylvia deserticola* was around the camel trough in the Akakus on 11th. A **Woodchat Shrike** *Lanius senator* was observed in Ghat on 12th and a **Masked Shrike** *L. nubicus* in Wadi Mathkendoosh next day. Seven **Fulvous Babblers** *Turdoides fulvus* frequented the grounds of Germa Hotel on 14th. **Desert Sparrows** *Passer simplex* were nesting at Ghat campsite on 10th and were present in Akakus and at the Ubari lakes. **Spanish Sparrows** *P. hispaniolensis* were nesting at Germa camp on 14th and were present at Umm al Maa and Mandala lakes.

In Cyrenaica, a pair of **Egyptian Vultures** *Neophron percnopterus* was seen in Wadi al-Khuff on 26th, along with **Crag Martin** *Hirundo rupestris*, **Blue Tit** *Parus caeruleus* of the subspecies *cyrenaica* and **Common Raven** *Corvus corax*. **Common Chaffinch** *Fringilla coelebs africana* was abundant alongside smaller numbers of **European Serin** *Serinus serinus* and **Common Linnet** *Carduelis cannabina* at the ancient site of Cyrene on 22nd–24th. A **European Goldfinch** *C. carduelis* was at Qasr Libya on 22nd (*SH*).

Madagascar

An adult **Sooty Gull** *Larus hemprichii* observed at the island of Nosy Ve, south-western Madagascar, on 11 November 2005 constitutes the first for the country (*DS*). A pair of **Madagascar Red Owls** *Tyto soumagnei* was found at *c.*1,000 m elevation in Montagne d'Ambre National Park, in the far north of the island, on 10 June (*VD*).

Madeira

Records from July 2005 at Selvagem Pequena included a **Purple Heron** *Ardea purpurea* on 8th, a pale-morph **Eleonora's Falcon** *Falco eleonorae* on 7th, and a **Sooty Tern** *Sterna fuscata* on 7–8th, following a pair there briefly a month earlier. An adult **Red-billed Tropicbird** *Phaethon aethereus* was seen north of the Salvages on 9th (per *Birding World* 18: 281). A first-summer **Ring-billed Gull** *Larus delawarensis* was in Funchal harbour on 17 July (per *Birding World* 18: 281).

Eleonora's Falcon *Falco eleonorae* (Pete Leonard)

The 2005 breeding season was very encouraging for the Critically Endangered **Zino's Petrel** *Pterodroma madeira*: six new nests were found, bringing the total number known to 75; of these, 68 were active in 2005 and 39 young fledged. The population is now estimated at 70–85 pairs (per *Parque Natural da Madeira*).

Mauritania

A research cruise to the upwelling zone off Banc d'Arguin in July 2005 produced an estimated total of *c.*10,000 **Wilson's Storm-petrels** *Oceanites oceanicus* on 15–17th, including feeding flocks of up to 700 birds. These numbers are unprecedented here, although it seems likely that large congregations of this species regularly visit the area in mid-summer. Also recorded in the area during this period were *c.*10,000 **Black Terns** *Chlidonias niger*, *c.*700 **Royal Terns** *Sterna maxima* and *c.*350 **Cory's Shearwaters** *Calonectris diomedea*, all of the form *borealis* where this could be determined (per *Birding World* 18: 324; per *Dutch Birding* 27: 346).

Records from November 2005 include the following. On the Banc d'Arguin, 21 **Common Shelduck** *Tadorna tadorna* were found close to Nair Island, on 27th. In Diawling National Park, two **Black Storks** *Ciconia nigra*, at least 100 **White Storks** *C. ciconia* and three **Dark Chanting Goshawks** *Melierax metabates* were seen on 24th. Also there, a perched **Lizard Buzzard** *Kaupifalco monogrammicus* was discovered on 29th; this is *c.*70 km north of the Senegal border and some 400 km north of its usual range. A **Brown Snake Eagle** *Circaetus cinereus* was in the Marigot Three area on 30th. Four **Desert Sparrows** *Passer simplex* were observed at km 253 on the Nouadhibou–Nouakchott road on 25th and four more on the Ten-Alloul track, the turning from km 253, on the 28th, with a pair nest building in an *Acacia* tree (*RCr*).

Morocco

The first **Greater Yellowlegs** *Tringa melanoleuca* for Morocco was at Oued Massa on 16 November. Morocco's second and third **Franklin's Gulls** *Larus pipixcan* were a first-winter at Oued Massa on 3 November and an adult at Oued Souss, Agadir, on 4 November. The third **Yellow-browed Warbler** *Phylloscopus inornatus* was observed north-east of Agadir on 5 November (per *Dutch Birding* 27: 408–421; per *Birding World* 18: 457).

Light-mantled Sooty Albatross *Phoebetria palpebrata* (Claudia Donati)

Mozambique

A **Light-mantled Sooty Albatross** *Phoebetria palpebrata* was found exhausted on the beach at Ponto Malangane in late June 2005. It was taken into care in South Africa and released off Cape Town when it had recovered (*BF* et al. per *TH*). A flock of 30 **Greater Frigatebirds** *Fregata minor* with one **Lesser Frigatebird** *F. ariel* was at Pomene on 19–20 September (*AV*). Another **Lesser Frigatebird** was photographed at Ponta D'Oura on 13 January 2006 (*EEk*). Two pairs of **Locust Finches** *Paludipasser locustella* were seen in grasslands between Beira and Savane on 13 November 2005 (*BP*).

Namibia

In April–December 2005 the following were reported. A **Little Penguin** *Eudyptula minor* was photographed ashore on Ichaboe Island in mid-April 2005 (*NU & TDe* per *PRy*). This puzzling record is the first of this Australasian species for Africa and raises the question how the bird got here; the bird was captured and examined but showed no signs of prior captivity. Two **Wandering Albatrosses** *Diomedea exulans* were spotted *c.*60 nautical miles west of Walvis Bay on 22 July, with a **Grey-headed Albatross** *Thalassarche chrysostoma* in the same area next day (*BR*). A **European Honey Buzzard** *Pernis apivorus* was seen at Kalizo Lodge, east of Katima Mulilo, in the extreme north-east, on 6 December (*DR*). Single **Booted Eagles** *Hieraaetus pennatus* were at Walvis Bay Sewage works on 22 October (*TO*) and 1 November (*BM & TT*).

Eurasian Oystercatchers *Haematopus ostralegus* were seen at Walvis Bay on 22 October 2005 (*TO*) and 1 November (*BM & TT*). Also at Walvis Bay, an **American Golden Plover** *Pluvialis dominica* was found on 22 October (*TO*). Single **Common Redshanks** *Tringa totanus* were seen throughout the period at Walvis Bay and/or Swakopmund (*MB, BM, TO & TT; KW* per *TH*). A **Terek Sandpiper** *Xenus cinereus* was at Walvis Bay on 30 October (*MB, TO, TT*). Five **Red-necked Phalaropes** *Phalaropus lobatus* were at Walvis Bay on 3 June (*KW* per *TH*), with four also there on 14 November, and one at Mile 4, Swakopmund, on 4–5 November (*BM & TT*). Namibia's first **Lesser Crested Tern** *Sterna bengalensis* was found at Mile 4 Salt Works, Swakopmund, on 5 May (*MB*); it was last reported on 11 November (*MB, TT*). Also at Swakopmund, 20,000+ **Common Terns** *S. hirundo* were counted on 14 November, *c.*2,000 **Black Terns** *Chlidonias niger* on 24 October, with 4,000+ there on 14 November, and one **White-winged Tern** *Ch. leucopterus* on 5–6 and 13 November, with 40+ there on 14 November (*BM & TT*).

A **Grey Wagtail** *Motacilla cinerea* was found in Halali Camp, Etosha National Park, on 19 October; it remained there for some time and was photographed on 2 November (*PLw*). Also in Etosha, an **Olive-tree Warbler** *Hippolais olivetorum* was discovered near Namutoni on 24 November (*DR*). **Shelley's Sunbird** *Cinnyris shelleyi* was regularly observed and also photographed at Kalizo Lodge, near Katima Mulilo, in September–December (*EE, ED, DH*; per *TH*).

Niger

The following species, for which there are few published records in Niger, were observed in the south-east in September–October 2005. A **Black Stork** *Ciconia nigra* was *c.*20 km north of Diffa on 4 October. A **Lesser Spotted Eagle** *Aquila pomarina* flew east of Maine-Soroa on 7 October. An **African Hobby** *Falco cuvierii* was chasing grasshoppers near Maine-Soroa on 24 September. A **White-rumped Swift** *Apus caffer* was noted north of Diffa on 27 September and another, with Little Swifts *A. affinis*, at Diffa on 6 October; these are the first records from eastern Niger, all previous records being from the south-west. A pair of **River Prinias** *Prinia fluviatilis* was nest building at the Komadougou Yobé River, Diffa, on 23 and 29 September (Fig. 5), and another was by the River Niger at Tillabéry on 11 October; these would constitute the first definite records for the country, if accepted. A **Yellow-spotted Petronia** *Petronia pyrgita* was found west of Diffa on 26 September (*FPJ & JFR*).

Following the first observations of **Mottled Swift** *Tachymarptis aequatorialis* and **Alpine Swift** *T. melba* in 2004 (see elsewhere in this issue), Mottled and possibly also Alpine Swifts were seen on 25 October 2005 just east of Arlit, in a mixed flock with Common Swifts *Apus apus*, Pallid Swifts *A. pallidus* and a Little Swift *A. affinis* (*WM & RC*). A photograph of a possible **African Black Swift** *Apus barbatus* in the same flock is still being examined. The latter species has not yet been confirmed for Niger, although there are more than ten probable observations during the rainy season, including possible breeding in caves in the Dallol Bosso, 100 km east of Niamey (*JB*).

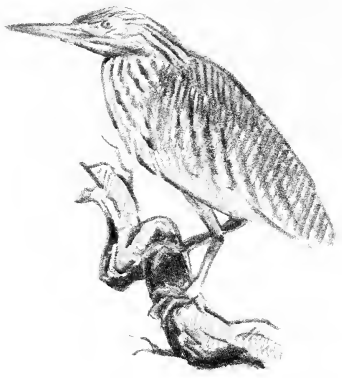
Senegal

In October 2005, an **American Golden Plover** *Pluvialis dominica* was present at Technopole, Dakar, on 29th (*WF*; Fig. 6). In December 2005, two more Nearctic vagrants were found: an **American Wigeon** *Anas americana* at Djoudj National Park on 20th, probably a young male (Fig. 7), and a **Laughing Gull** *Larus atricilla* at Siné Saloum on 28th (*AF*; Fig. 8).

Seychelles

Reports from May–December 2005 received by Seychelles Bird Records Committee (SBRC) include the first **Sooty Gull** *Larus hemprichii* for Seychelles, an adult in breeding plumage at Aride Island on 29 August. Nine **Flesh-footed Shearwaters** *Puffinus carneipes* were reported from five locations, on 25–27 October, off the north and north-east edge of the Seychelles Plateau (north of Bird and Denis islands); four previous records have been accepted by SBRC to date. The fifth **Wilson's Storm-petrel** *Oceanites oceanicus* for the archipelago was also reported in the same area on 27 October. A **Red-billed Tropicbird** *Phaethon aethereus* stayed at Bird Island from 6 May until 28 August. The fifth **Great Bittern** *Botaurus stellaris* for Seychelles was also found there on 5–13 November, as well as the third **Madagascar Pond Heron** *Ardeola idae* east of the Aldabra group (where it breeds on Aldabra Atoll) on 14 September. A **Great White Egret** *Egretta alba* was found at an unnamed islet off Benjamin, St Joseph Atoll, on 21 July, and a **Purple Heron** *Ardea purpurea* at North Point, Mahé, on 23 October. A **White-faced Whistling Duck** *Dendrocygna viduata* was at Cinq Cases beach, Aldabra, on 20 August.

Eleven **Amur Falcons** *Falco amurensis* were on North Island on 30 November, with four still present on 23 December. A **Eurasian Hobby** *F. subbuteo* was seen at Mahé on 8 November and an **Allen's Gallinule** *Porphyrio alleni* at Picard, Aldabra, on 6 June. The second **Stone-curlew** *Burhinus oedicnemus* for Seychelles



Madagascar Pond Heron *Ardeola idae* (Pete Leonard)

was at Bird Island on 1 November (interestingly, the first record, now accepted by SBRC, was at this same location the previous season), with the fifth **Collared Pratincole** *Glareola pratincola* also there on 29 October, and two from 31 October to 23 December. A **Grey-tailed Tattler** *Heteroscelus brevipes* at Glacis, Mahé, on 30 September, was the third for Seychelles. A **European Turtle Dove** *Streptopelia turtur* stayed at Bird Island on 4–9 November and a **European Roller** *Coracias garrulus* at Cousine on 13–29 November.

The third **Greater Short-toed Lark** *Calandrella brachydactyla* remained at Bird Island from mid October to 12 November. A **Mascarene Martin** *Phedina borbonica* was at L'Union Estate, La Digue, on 4 July. Single **White Wagtails** *Motacilla alba* were observed at Bird Island on 5 May and at Cousine Island on 24 November. A **Red-throated Pipit** *Anthus cervinus* was at Bird Island on 8–12 November. A **Common Redstart** *Phoenicurus phoenicurus* was ship-assisted from east of La Digue on 29 October to La Digue on 30 October, and another was at Bird Island on 3–5 November. An **Isabelline Wheatear** *Oenanthe isabellina* on North Island on 12 October constitutes the fourth report for Seychelles. Second reports were received for **Sedge Warbler** *Acrocephalus schoenobaenus* at Bel Air, Mahé, on 9 November, and **Icterine Warbler** *Hippolais icterina* at Bird Island on 10 November. Also at Bird Island were a **Spotted Flycatcher** *Muscicapa striata* on 7–9 November and a **European Golden Oriole** *Oriolus oriolus* on 5–9 November (*all* per *AS*).

Sierra Leone

During a bird census carried out in Sierra Leone's coastal wetlands in January–February 2005, four species were found that had apparently not been reported previously: five **Great White Pelicans** *Pelecanus onocrotalus* were counted at the Scarcies estuary and 253 at Yawri Bay, 12 **Eurasian Spoonbills** *Platalea leucorodia* at Scarcies, 18 **Northern Shovelers** *Anas clypeata* at Yawri, and a **Terek Sandpiper** *Xenus cinereus*, also at Yawri (www.projects.wiwo.org/).

Among the more interesting records made during a birding trip to this little-visited country in the second half of November 2005 were a **Least Honeyguide** *Indicator exilis*, claimed from Tiwai Island, two **Yellow-throated Cuckoos** *Chrysococcyx flavigularis* in Gola Forest and, intriguingly, **Chattering Cisticola** *Cisticola anonymus* in a flooded area south of Gola; the latter would confirm the existence of an isolated Upper Guinea population of this species (*AH*).

South Africa

Records from April–December 2005 include the following. On pelagic trips out of Cape Town, at least 27 **Wandering Albatrosses** *Diomedea exulans* were recorded in August–November, ten **Southern Royal Albatrosses** *D. (e.) epomophora* between 30 July and 10 September, and 13 **Northern Royal Albatrosses** *D. (e.) sanfordi* between 28 May and early October (*AG, JGr*). A juvenile **Grey-headed Albatross** *Thalassarche chrysostoma* was seen *c.*60 nautical miles west-northwest of Cape Columbine, Western Cape, on 3–4 August (*BW*), and an adult off Cape Point in mid September (*TH*). The **Light-mantled Sooty Albatross** *Phoebetria palpebrata* picked up in Mozambique in late June (see above)

was taken out to sea and released off Cape Town when it had recovered (per *TH, CD*). A very late **Great-winged Petrel** *Pterodroma macroptera* was observed on 11 June (*JGr*). Single **Spectacled Petrels** *Procellaria (aequinoctialis) conspicillata* were seen in mid September (two), in early October (per *TH*) and on 27 December (*RW*). A **Grey Petrel** *P. cinerea* was found on 3 September (*AG*) and 5 November (*JGr*); this species is very rare in southern Africa. An unexpected **Cory's Shearwater** *Calonectris diomedea* was seen on 17 June. A **Manx Shearwater** *Puffinus puffinus* on 21 December was the first for quite some time (*RW*). A **Little Shearwater** *P. assimilis* was found rather close to shore on 7 May and another in mid September. Single **Grey Phalaropes** *Phalaropus fulicarius* were spotted in early October and on 3 November (*JGr*).

The **Bulwer's Petrel** *Bulweria bulwerii* seen at 35°24'S 11°08'E on 11 December 2004 (*Bull. ABC* 12: 71) is not the most southerly record yet, as suggested; the southernmost was one seen 5 km south-east of Cape Nelson, Victoria, Australia, at 38°31'S 141°34'E on 14 September 1986 (*cf. Handbook of Australian, New Zealand and Antarctic Birds* 1: 556) (*SH & NC*).

A **King Penguin** *Aptenodytes patagonicus* found at Camps Bay beach, outside Cape Town, on 11 August, was taken into care but died the next day; there are few records of this species from southern Africa (per *TH*). A **White-tailed Tropicbird** *Phaethon lepturus* reportedly flew over Plettenberg Bay, Eastern Cape, on 7 October (*RG*). An **Australian Gannet** *Sula serrator*, discovered in the Cape Gannet *S. capensis* colony on Bird Island, Western Cape, on 7 August (*TH, MG, DN, GK*), was present until at least 11 September (per *TH*). A female **Greater Frigatebird** *Fregata minor* was at Pennington Beach, on the KwaZulu-Natal south coast, on 14 July (*IRa*).

The two **Slaty Egrets** *Egretta vinaceigula* first reported from Marievale Bird Sanctuary, Gauteng, on 23 January, were still present on 15 May, with one still there on 1 September (*RM* per *TH*), and up to three were at this site on 9 October (per *TH*). Another was at Grootvaly Wetland Reserve, Gauteng, on 26 July (*SM*) and remained until at least 21 August (per *TH*). One was at Ndumo Game Reserve, KwaZulu-Natal, on 21 October (*TM*). Southern Africa's third **Little Blue Heron** *E. caerulea* was still at the River Olifants estuary, north of Lambert's Bay, Western Cape, on 5 September (per *TH*); this bird has now been present in this area four years. During a pelagic trip out of Simonstown on 22 October, a flock of at least 150 **White Storks** *Ciconia ciconia* was seen *c.*45 km south of Cape Point (*JGr*). A **European Honey Buzzard** *Pernis apivorus* flew over Pietermaritzburg, KwaZulu-Natal, on 8 September (*MBr*); probably the same bird was also seen on 12th (per *TH*). Another flew over Wierda Park, Gauteng, on 14 October (*PW*). An adult **Egyptian Vulture** *Neophron percnopterus* was with a group of Cape Vultures *G. coprotheres* attending a carcass alongside the road to Coffee Bay in the Transkei on 1 November (*PC* per *TH*). A **Rüppell's Griffon Vulture** *Gyps rueppellii* was seen at Crook's Corner near Pafuri, in the north of Kruger National Park, on 13 August (*AO*); the long-staying bird at the Cape Vulture colony in Blouberg Nature Reserve was still present on 24 September (per *TH*). A **Striped Crake** *Aenigmatolimnas marginalis* was reported from the Lake Panic bird hide near Skukuza, Kruger National Park, on 2 July (*KJ*). An **American Purple Gallinule** *Porphyrio martinica* was seen wandering along the N3 just outside Johannesburg on 3 May (*RM* per *TH*).

The regularly returning **Eurasian Oystercatcher** *Haematopus ostralegus* at Elands Bay, Western Cape, was again present on 6 September (*VW*); another was at St Lucia, KwaZulu-Natal, on 10 September (*PLa*), two were at the Umfolozi River mouth, KwaZulu-Natal, on 13 September (*AHa, JS*), and three on the beach at Cape Point, Western Cape, on 6 November (*GKî*). Southern Africa's 13th **White-rumped Sandpiper** *Calidris fuscicollis* was found at Marievale Bird Sanctuary, Gauteng, on 17 September (*RM & DD*); it was still present on 13 October (per *TH*). A **Pectoral Sandpiper** *C. melanotos* was at Twee Rivieren in Kgalagadi Transfrontier Park, Northern Cape, on 18 August (*BV*), and one was at Vaalkop Dam on 1 October (*RM*). The two **Black-tailed Godwits** *Limosa limosa* found at De Plaat on the Berg Rivier, Western Cape, on 22 March remained until the end of August at least (per *TH*), with one still there on 16 October (*VW*). Three were seen near Welkom, Free State, on 20 May (*BC & JL* per *TH*), with one there on 1 October (*GR*). A flock of 28 at Spitskop Dam, near Kimberley, Northern Cape, on 11 August is an interesting record, both for the number of birds and for the date (*MA*). One was at Marievale Bird Sanctuary, Gauteng, on 8 October (*DD*). A **Common Redshank** *Tringa totanus* was at Malandeni, Ladysmith, KwaZulu-Natal, on 20 August (*KG*) and another at Marievale Bird Sanctuary, Gauteng, from 24 September (*RM & DD*) until at least 19 October (per *TH*). In Western Cape, a **Red-necked Phalarope** *Phalaropus lobatus* was at Still Bay Bird Sanctuary from 9 December until at least 13th (*HL*), and eight were at their usual site at Velddrift on 28 December (*PC*).

A **Yellow-billed** (Greater) **Sheathbill** *Chionis alba* was in Cape Town harbour on 24 June, with a second individual there three days later; both remained until at least 1 July (*EFo*) and one was still present on 13 September, with the other being relocated at Kommetjie on 13 August (*CH & NH*), where it was last seen the next day (per *TH*). Records of **Franklin's Gulls** *Larus pipixcan* include one at the Umgeni River mouth, Durban, KwaZulu-Natal, on 6 June (*MO*), one just off Dyer Island, near Gansbaai, Western Cape, on 21 June (*RCo*), one in full breeding plumage at Lambert's Bay, Western Cape, on 2 August (*RMu*) and still present on 6 September (per *TH*), and one at St Helena Bay,

Western Cape, on 13 September (*FG*). A **Common Black-headed Gull** *L. ridibundus* was at Durban Bay, KwaZulu-Natal, on 27 April (per *TH*) with one in breeding plumage on 19 October (*DA & AMc*). One returned to Driftsands Reclamation Works in Port Elizabeth, Eastern Cape, on 11 November (*AT*); this bird has now spent the past few seasons there (per *TH*). A **Heuglin's Gull** *L. (fuscus) heuglini*, first located in Durban Bay, KwaZulu-Natal on 26 April, remained in the area until at least 28 May (*AMc* per *TH*).

The long-staying **Gull-billed Tern** *Gelochelidon nilotica* at Kromme Rivier estuary, St Francis Bay, Eastern Cape, first reported on 25 February, remained there until 29 May at least (*JBr* per *TH*). Perhaps the same individual was reported at Cape Recife, Port Elizabeth, Eastern Cape, on 3 September (*CL*). A **Lesser Crested Tern** *Sterna bengalensis* was claimed from Tsitsikamma lagoon, Eastern Cape, on 29 October (*RA* per *CC*). The **Bridled Tern** *S. anaethetus* that returned for its fifth successive year to Cape Recife, Port Elizabeth, Eastern Cape, on 27 May, was last reported on 20 August (per *TH*). An **African Skimmer** *Rynchops flavirostris* was still present at Roodekoppies Dam, Gauteng, on 17 July (*RM*).

On 16 December, a **Garden Warbler** *Sylvia borin* was mist-netted at Tygerberg Nature Reserve, Western Cape (*PN*). The first **Rose-coloured Starling** *Sturnus roseus* for southern Africa was photographed in Kalahari Gemsbok National Park / Kgalagadi Transfrontier Park, Northern Cape, on 15 July (*JSa*). Although this species is known to wander widely, the only previous record south of the Sahara of this Palearctic species is of one seen in southern Ethiopia on 23 March 2005 (see elsewhere in this issue) and the possibility of an escape needs to be eliminated before the present record can be accepted. On 27 August, a **Black-eared Seedeater** *Serinus mennelli* was found near Punda Maria, in the north of Kruger National Park (*AB*); this apparently constitutes the first record for the park, with only a few others claimed in the country.

Sudan

During a visit to Rumbek, a small town surrounded by wooded savanna and a few cultivated areas in southern Sudan (06°50'N 29°42°E), on 21–28 October 2005, several species were recorded whose occurrence is not indicated in the relevant one-degree square of their distribution map in Nikolaus (1987, *Distribution Atlas of Sudan's Birds*). These include the following: **Little Sparrowhawk** *Accipiter minullus* (two on 27th), **Wahlberg's Eagle** *Aquila wahlbergi* (one on 26th), **Tawny Eagle** *A. rapax* (one on 27th), **Booted Eagle** *Hieraaetus pennatus* (a pale morph on 28th), **Grey Kestrel** *Falco ardosiaceus* (one on 22nd; two together on 27th), **Bruce's Green Pigeon** *Treron waalia* (singles on 22nd–25th), **African Mourning Dove** *Streptopelia decipiens* (regularly 2–3 in town), **Red-eyed Dove** *S. semitorquata* (one on 22nd), **Rose-ringed Parakeet** *Psittacula krameri* (seen daily, up to five together), **Woodland Kingfisher** *Halcyon senegalensis* (one on 26th), **European Roller** *Coracias garrulus* (singles on 22nd and 25th), **Black-and-white-casqued Hornbill** *Bycanistes subcylindricus* (two on 21st), **Yellow-fronted Tinkerbird** *Pogoniulus chrysoconus* (singles on 22nd and 26th), **Common Bulbul** *Pycnonotus barbatus* (seen daily in small numbers), **Spotted Palm Thrush** *Cichladusa guttata* (one on 24–25th), **Eastern Olivaceous Warbler** *Hippolais pallida* (two on 23rd), **Common Fiscal** *Lanius collaris* (one on 24th), **Black-headed Gonolek** *Laniarius erythrogaster* (one on 22nd), **Brubru** *Nilaus afer* (one singing on 22nd; two immatures on 25th), **Speckle-fronted Weaver** *Sporopipes frontalis* (5–10 on 22nd; singles on 24–26th), **Northern Masked Weaver** *Ploceus taeniopterus* (a male on 22nd) and **Vitelline Masked Weaver** *P. velatus* (at least three near the Barnaam (or Naam) River, *c.*20 km south-east of Rumbek, on 26th) (*BP*).

Tanzania

Records from 2005 include the following. A small drying pond near the Speke Bay Lodge turn-off had a female **Striped Crake** *Aenigmatolimnas marginalis* on 4 August (*AK*). An **African Finfoot** *Podica senegalensis* was found on the stream between Kisima Ngeda Camp and Lake Eyasi in August (*KM*). At least 20 **Broad-billed Sandpipers** *Limicola falcinellus* were at the lake in the Ngorongoro crater on 11–12 July (*AD*). A juvenile **Great Spotted Cuckoo** *Clamator glandarius* begging aggressively for food from its host, a Superb Starling *Lamprotornis superbus*, was photographed on 10 July along the road from Ndutu Lodge to the main road through the Serengeti (*GG* per *KM*).

Exceptionally large concentrations of **Thrush Nightingales** *Luscinia luscinia* were reported in parts of southern Tanzania in December 2005–January 2006, as well as large numbers of **Grasshopper Buzzards** *Butastur rufipennis* and **Irania** *Irania gutturalis*; possibly, the dry conditions further north are the cause of this influx (*NBa*). **Kungwe Apalis** *Apalis argentea* was found east of Mahale National Park, western Tanzania, in almost every patch of riverine forest visited; the only two previous records away from Mahale are two specimens collected in the late 1930s (*DM* per *NBa*). A sighting of **Bertram's Weaver** *Ploceus bertrandi* at Irente Farm, Lushoto, in the West Usambaras, in early September, is a significant record; this montane forest-edge species survives in degraded habitat at low density (*JD* per *NBa*).

Togo

White-browed Forest Flycatcher *Fraseria cinerascens*, observed in Fazao-Malfakassa National Park on 11 November 2005, constitutes an addition to the Togo list (*PR*).

Tunisia

Records from April–June 2005 include the following. An adult **Yellow-billed Stork** *Mycteria ibis* was with Eurasian Spoonbills *Platalea leu-*

corodia at Korba Lagoons, Cap Bon, from 27 June until at least 10 July. Five family parties of **Marbled Ducks** *Marmaronetta angustirostris* were also there on 27 June (per *Birding World* 18: 281; per *Dutch Birding* 27: 346). Several **Steppe Eagles** *Aquila nipalensis*, including a group of five, were reported from Cap Bon in April–May (per *Dutch Birding* 27: 277). Several **Egyptian Nightjars** *Caprimulgus aegyptius* were in song at Ghidma, south of Douz, in early May (*AvdB*). In June, up to 14 **Cream-coloured Coursers** *Cursorius cursor* and *c.*30 **Desert Sparrows** *Passer simplex* were observed at Bir Soultane on 24th, two male and one female **Egyptian Nightjar** *Caprimulgus aegyptius* at Ghidma, with another male at El Matrouha, on 25th, and four **Levaillant's Woodpeckers** *Picus vaillantii* at Ain Draham on 23rd (per *Birding World* 18: 281; per *Dutch Birding* 27: 346).

On 9 October 2005, the Korba and Soliman Lagoons held 4,300 **Greater Flamingos** *Phoenicopterus (ruber) roseus*, including 87 ringed, and also **Marbled Ducks**, **Ferruginous Ducks** *Aythya nyroca* and **Purple Swamphens** *Porphyrio porphyrio* (*HA*).

Uganda

For July–August 2005 the following records were received. A **Broad-billed Sandpiper** *Limicola falcinellus* was found at Lake Katwe, Queen Elizabeth National Park, on 29 August; there are few records for this Palearctic migrant in Uganda. The previous day, a **Ruddy Turnstone** *Arenaria interpres* was seen on Kazinga Channel in the park. A pair of **Green-breasted Pittas** *Pitta reichenowi* was nest building in Kibale National Park on 22 July; what was almost certainly the same pair was seen again on 7 August. At Mubwindi Swamp, Bwindi Impenetrable National Park, a pair of **Green Broadbills** *Pseudocalyptomena graueri* was observed at its nest on 15 July, and a pair with a juvenile was seen on 14 August (*DH*). Two **Fischer's Lovebirds** *Agapornis fischeri* were seen in Entebbe's Botanical Garden on 14 January 2006; they had apparently been recorded before at this site and would constitute an addition to the Ugandan list, if accepted as wild birds (*JK*).

Zimbabwe

Contrary to the statement in a previous Recent Reports (*Bull. ABC* 12: 191), the **Basra Reed Warbler** *Acrocephalus griseldis* claimed from Victoria Falls on 2 January 2005 would constitute the first (not the second) record for Zimbabwe, if accepted. There have been two submissions so far, from 2 March 1998, at Victoria Falls, and 4 November 1998, at Chikwenya, but neither has been accepted (*IR*).

Records were collated by Ron Demey from contributions supplied by David Allan (DA), Mark Anderson (MA), Ray Archer (RA), Hichem Azafzaf (HA), Neil Baker (NBa), Clive Barlow (CB), Rubén Barone (RB), Errol de Beer (EdB), Hannelore Bendsen (HB), Arnoud van den Berg (AvdB), Mark Boorman (MB), Nik Borrow (NB), André Botha (AB), Nicky Bousfield (NBo), John Bradshaw (JBr), Chris Brewster (CBr), Joost Brouwer (JB), Mark Brown (MBr), Robert Cheke (RC), Neil Cheshire (NC), Philip Coetzee (PC), Callan Cohen (CC), Brian Colahan (BC), Robert Cope (RCo), Richard Cruse (RCr), Alexis Dall'Asta (AD), Dave Deighton (DD), Tony Delport (TDe), Eckart Demasius (ED), Ron Demey (RD), Klaas-Douwe Dijkstra (KD), Vladimir Dinets (VD), John Dixon (JD), Tim Dodman (TD), Cliff Dorse (CD), Eric Ehlers (EE), Ehren Eksteen (EEk), Wouter Favyets (WF), Berrie Ferreira (BF), Pete Ferrera (PF), Simon Feys (SF), Hamish Fletcher (HF), Amine Flitti (AF), Erik Forsyth / Rockjumper Birding Tours (EF), Eugene Fourie (EFo), Ursula Franke (UF), George Gerdts (GG), Margaret Gibbs (MG), Ray Goodwin (RG), Jan Goossens (JG), Ken Gordon (KG), John Graham (JGr), Anne Gray (AG), Malcom Greene (MGr), Felicity Grundlingh (FG), Adrian Haagner (AHa), Pete Hancock (PH), Trevor Hardaker (TH), Richard Hearn (RH), Andrew Hester (AH), Carol Hewitt (CH), Nigel Hewitt (NH), Sveinung Hobberstad (SHo), David Hoddinott / Rockjumper Birding Tours (DH), Stan Howe (SH), Colin Jackson (CJ), Flemming Pagh Jensen (FPJ), Kevin Joliffe (KJ), Johnnie Kamugisha (JK), Chege Kariuki (CK), Geoff Kieswetter (GKi), Alastair Kilpin (AK), Gordon King (GK), Peter Lack (PL), Phil Langston (PLa), Peter Lawson (PLw), Janine Lieffrig (JL), Hans Linde (HL), Derek Lister (DL), Hans van der List (HvdL), Chris Lotz (CL), Stan Madden (SM), Graham McCulloch (GM), Alistair McInnes (AMc), Kevin Mlay (KM), Flomo Molubah (FM), Richard Montinaro (RM), Patrick Morton (PM), David Moyer (DM), Zee Mpofu (ZM), Temba Mthembu (TM), Ben Mugambi (BM), Mark Muller (MM), Wim Mullié (WM), Ray Murray (RMu), Andy Musgrove (AM), Doug Newman (DN), Peter Nupen (PN), Anton Odendal (AO), Michael O'Donaghue (MO), Tim Osborne (TO), Craig Pearman (CP), Bram Piot (BP), Paul Radley (PR), Hugo Rainey (HR), Ian Ralph (IRa), Jan Fischer Rasmussen (JFR), Gert Rautenbach (GR), Ian Riddell (IR), Diane Ridgley (DR), Detlef Robel (DRo), Barrie Rose (BR), Peter Ryan (PRy), Jörgen Sagvik (JSa), Peter Samuels (PS), David Shackelford (DS), James Sibiya (JS), Adrian Skerrett (AS), Neville Skinner (NS), Evangeline Swope (ES), Alf Taylor (AT), Keith Temple (KT), Tony Tree (TT), Steph Tyler (ST), Neville-Nash Uhongora (NU), Brian Vanderwalt (BV), Andrew Viljoen (AV), Nigel Voaden (NV), Jaap van der Waarde (JvdW), Ross Wanless (RW), Vincent Ward (VW), Barry Watkins (BW), Keith Wearne (KW), Peter Wilgenbus (PW), Edwin Winkel (EW) and from Birding World, capebirdnet, Dutch Birding, Parque Natural da Madeira, SARareBirdAlert, www.projects.wiwo.org/ *and* www.zestforbirds.co.za.

Contributions for Recent Reports can be sent to Ron Demey, Van der Heimstraat 52, 2582 SB Den Haag, Netherlands and also by e-mail: rondemey@compuserve.com.

Reviews

Oiseaux de Tunisie / Birds of Tunisia

Paul Isenmann, Thierry Gaultier, Ali El Hili, Hichem Azafzaf, Habib Dlensi & Michael Smart. 2005. Paris: Société d'Études Ornithologiques de France (SEOF), e-mail: seof@mnhn.fr, website www.mnhn.fr/assoc/seof/accueil.htm. Paperback, 432 pp, 432 pages, 130 plates, 150 maps. ISBN 2-9506548-9-4. € 38.

Tunisia is a relatively small country (164,500 km²) in north-west Africa. The climate is typically Mediterranean in the north, becoming more arid toward the south and Saharan in the southern half. A wide range of habitats is present: cork oak forests, mountain ranges (highest peak 1,544 m), steppe plains, an immense depression with salt lakes, 1,300 km of Mediterranean coastline with steep cliffs, coastal lagoons and a considerable area of intertidal flats, oases and impressive sand dunes. This variety in habitats, the rich avifauna, good infrastructure and touristic facilities (including cheap flights) make the country a popular destination for visiting birders. In addition there is a growing local birdwatching and conservation community. The three Tunisian co-authors are members (El Hili also founder and President) of 'Les Amis des Oiseaux', a succesful organisation established in 1975. All 46 Important Bird Areas (IBAs) have been protected since 2001!

Following the synthesis of the birds of north-west Africa (*Les Oiseaux du Nord-Ouest de l'Afrique*), which included Tunisia, written by H. Heim de Balsac and N. Mayaud in 1962, the only recent attempt to produce a modern annotated list of the country was *The Birds of Tunisia* by Peter Thomsen and Peder Jacobsen (Copenhagen, 1979). Although the latter book was rather incomplete, based on limited sources and is now out of print, it was my main source of information during a few visits to Tunisia. However, during my next visits I will definitely be carrying another book. Carrying in the most literal sense of the word, since the new *Birds of Tunisia* has become an impressive 432-page volume on good-quality paper. The size is due to the fact that the book is entirely bilingual (English and French).

Short, informative introductory chapters cover geography, history of Tunisian ornithology, a compact checklist of all 395 species recorded (of which 193 breed), biogeographical analysis, and short comparisons with the avifauna of Algeria and Libya, as well as describing changes to the breeding avifauna in the 20th century, and the Mediterranean and trans-Saharan migration systems. The main part of the book is formed by the annotated checklist, summarising available information on taxonomy, status, distribution, habitat and phenology of each species, together with data on nesting and ringing recoveries. The information presented is rather anecdotal, with many dates, localities and observers (mostly visiting birders) mentioned. The 150 distribution maps, given for most of the regular breeding species show the 'potential breeding range'. Knowing that one of the authors (Gaultier) has been working on a breeding atlas based on half-degree squares, I would have preffered to see (in addition) the actual known breeding distribution by using symbols for possible, probable and definite breeding.

English species accounts within the same light purple shading as used for the English versions of the introductory chapters would have made reading easier. The book is lavishly illustrated with over 130 high-quality colour photographs (many by Gaultier and Azafzaf). Dates and localities are not mentioned, and a photo captioned *Botaurus stellaris* shows an immature Little Bittern *Ixobrychus minutus*. Nonetheless, despite these few minor remarks, it is an excellent book, and the authors are to be congratulated on their achievement.

Peter L. Meininger

Waterbird Monitoring in the Bijagós Archipelago, Guinea-Bissau / Monitorização de Aves Aquáticas no Arquipélago dos Bijagós, Guiné-Bissau

Tim Dodman and Joãozinho Sá. 2005. Dakar: Wetlands International & Bissau: Gabinete de Planificação Costeira / Organização para a Defense e o Desenvolvimento das Zonas Húmidas na Guiné-Bissau. 157 pp, line drawings, maps. Softback. Distributed by NHBS. Price unknown.

The Bijagós Archipelago is the second-most important site in West Africa for migratory waterbirds using the East Atlantic Flyway, after Mauritania's Banc d'Arguin, and regularly supports 600,000–900,000 waders. Its relative importance in the subregion may even be increasing, at least for the most numerous species, perhaps due to changing conditions at other West African key sites. It also supports significant colonies of resident waterbirds, notably herons, gulls and terns. This bilingual, English / Portuguese, publication presents an overview of the importance of Guinea-Bissau's coastal zone for waterbirds and analyses the data of waterbird surveys conducted between the 1980s and 2001. The

most recent survey, undertaken in January–February 2001, produced an estimate of 871,750 migratory waterbirds, including 505,000 Curlew Sandpipers *Calidris ferruginea*, 133,000 Red Knot *C. canutus*, 97,000 Bar-tailed Godwits *Limosa lapponica*, 24,500 Little Stints *Calidris minuta*, 28,000 Common Redshanks *Tringa totanus*, 23,500 Grey Plovers *Pluvialis squatarola* and 13,000 Whimbrels *Numenius phaeopus*. The publication also provides recommendations for future surveys and monitoring in the Bijagós, and includes a training manual for the execution of wetland surveys and waterbird monitoring programmes.

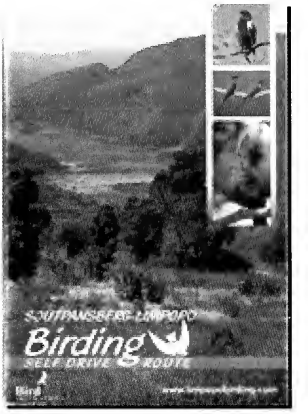
Ron Demey

Soutpansberg–Limpopo Birding

Sarah Venter. Third edn. 2005. 40 pp, colour photographs, map. Softback. ISBN 0-620-33623-4. Distributed by Soutpansberg–Limpopo Birding Route non-profit organisation. E-mail: contactus@limpopobirding.com. R25 plus postage.

The stated aim of this colourful and informative booklet is to introduce the Soutpansberg and Limpopo Valley areas to the birding world, and to encourage ecotourism, stimulate rural economic development and help create awareness of the need for bird conservation. The region covered lies in north-east South Africa, on the border with Botswana and Zimbabwe (the Limpopo River forming the border), with the northern part of Kruger National Park in the east. This relatively little-known area, which has some spectacular scenery, boasts over 540 bird species, including 29 southern African endemics and 32 near-endemics. The booklet contains general information about the region and suggestions on self-drive routes, information on tour operators, a brief presentation of 40 birding sites and an annotated birdlist. Trip reports and site lists can be accessed on the Soutpansberg-Limpopo Birding Route website: www.limpopobirding.com.

Ron Demey



Notes for Contributors

The ABC welcomes original contributions on all aspects of the birds of Africa, here defined as the area covered by Collar, N.J. and Stuart, S.N. 1985. *Threatened Birds of Africa and Related Islands: The ICBP/IUCN Red Data Book*. Cambridge, UK: International Council for Bird Preservation, namely continental Africa, Indian Ocean islands west of 80°E, e.g. Madagascar, the Mascarene Islands and Socotra; Atlantic Ocean islands on or east of the mid-Atlantic ridge, e.g. the Tristan da Cunha group, the Azores and the Canaries.

Contributions will be accepted subject to editing and refereeing by independent reviewers, where appropriate. The Editorial Team will be happy to advise authors on the acceptability of material at draft stage if desired.

Submissions

Two hard (printed) copies should be sent unless submitting by e-mail (preferred) to the editor's address on the inside front cover. Typewritten manuscripts should be double-spaced, on one side of the paper only, with wide margins all round. All submissions are acknowledged.

Contributions are accepted in English or French: French summaries are required for all papers published in English, and vice versa. Those submitting papers should supply a summary for translation into English, or French, as appropriate.

If you submit your contribution on CD or floppy disk, please state computer (e.g. IBM compatible PC, Macintosh) and word-processing package (e.g. Word, WordPerfect) used.

When sending your contribution on disk, please do not key anything in ALL CAPS (i.e. with the CAPS LOCK key depressed) unless the combination always occurs in that form (e.g. 'USA'). Do not use the carriage return key at the end of lines, and do not right justify the margins. When formatting tables use one tab, and not spaces, between each column. Unless a sketch map is provided as part of the article, the names of places should follow those on standard or readily available maps (preferably a recent edition of *The Times Atlas of the World*).

Preferred names

Given the current instability over worldwide lists of bird names, authors are requested to follow those used in *The Birds of Africa* Vols. 1–7. The African Bird Club has recently published (www.africanbirdclub.org/resources/checklist.html) a checklist of birds in its region. This is based on *Birds of Africa* but incorporates more recent revisions where appropriate. It includes preferred scientific, English and French names, as well as races and alternatives used by publications widely used in Africa. For bird names this list should be used or at least the preferred name used there should be given as an alternative. For non-*Birds of Africa* species (e.g. from the Malagasy region) use Dowsett & Forbes-Watson (1993). Deviation from such works should be noted and the reasons given. The Editorial Team will keep abreast of changes in nomenclature and when an agreed list of African names is available, will consider switching to follow it.

Style

Authors are requested to follow conventions used in The *Bulletin of the African Bird Club* and to refer to a recent issue for guidance. A detailed style guide can be obtained, either electronically or as a hard copy, on request from the Managing Editor.

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The ABC Representatives scheme aims to support existing members by providing a local point of contact in their region, for example, to answer queries to the Club, to solicit submissions for the bulletin, and possibly to arrange local meetings for members. Existing ABC members can contact their local Representative in the first instance with queries relating to the Club. ABC Representatives help to recruit new members in their region, for example, by distributing posters and arranging local advertising. In Africa, ABC Representatives help to identify opportunities to invest the ABC Conservation Fund and candidates for the Supported Membership scheme.

The Club aims to appoint many further ABC Representatives. If you are interested in supporting and promoting the Club in your region, have any queries, or require further information relating to the ABC Representatives scheme please do not hesitate to contact the Membership Secretary at the Club address, e-mail membership@africanbirdclub.org.

ABC is seeking Country Representatives in the following countries, principally within the Club's region: Algeria, Azores, Benin, Burkina Faso, Burundi, Cameroon, Cape Verde Islands, Chad, Comoros & Mayotte, Côte d'Ivoire, Djibouti, Equatorial Guinea, Ethiopia, Gabon, Guinea-Bissau, Guinea Conakry, Libya, Madeira, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Réunion, Rodriguez, Rwanda, Senegal, Sierra Leone, Socotra, Somalia, St Helena, Sudan, Togo, Tristan da Cunha and USA.

Supported and Affiliated Membership

The Supporting Members scheme is a key part of the Club's strategy of encouraging the spread of knowledge and understanding of birds as widely as possible throughout Africa. The scheme enables Africans who would not otherwise have the resources to join, to become members of the Club. The scheme is funded by Supporting Members who pay a minimum of UK£30 to cover their own membership and the subscription of at least one African member. The money they contribute over and above their own subscription is placed in a special fund that is used to cover the membership expenses of African members whom they may have nominated, or who have been nominated by other Club members.

Although we have suggested a minimum of UK£30 to become a Supporting Member, any contribution is welcome. All members of the Club, even if they do not feel able to become Supporting Members themselves, are invited to nominate candidates for supported memberships. Candidates should be nationals of an African country, with a genuine interest in wild birds but without the resources to become members in their own right. Africans who think they may qualify are very welcome to put their own names forward, supported by a letter of recommendation from someone such as their employer, teacher or an officeholder in a local wildlife organisation.

The scheme now also includes clubs who wish to be affiliated with the African Bird Club in African countries where it is difficult for local individuals to become members in their own right. Clubs accepted for membership under the scheme receive up to six copies of each issue of the bulletin for circulation among their members. Instead of paying a membership fee, Clubs are asked to provide a short annual report on their activities that may be published in the bulletin. Clubs interested in becoming Affiliated Member Clubs are invited to apply to the ABC Secretary giving details of their membership, their constitution or a statement of their objectives and conditions of their membership, and their activities to date.

ABC Information Service

ABC offers a service to help members with information requests. Perhaps you are planning a trip to Africa and need local advice, or maybe you are in search of an obscure fact about an African species. The Club does not guarantee to find all the answers but will try to help. The service is free to ABC members. Contact: Keith Betton, who is also custodian of ABC's journal library, at 8 Dukes Close, Folly Hill, Farnham, Surrey, GU9 0DR, UK. Tel: +44 1252 724068. Fax: +44 171 637 5626. E-mail: info@africanbirdclub.org.

AfricanBirding e-mail discussion list

Launched, in October 2000, by the ABC and the Pan-African Ornithological Congress, AfricanBirding or AB, as it is known, has become a useful forum for those inrerested in African birds. To join the discussion, which averages 1–2 messages a day, send a blank e-mail to AfricanBirding-subscribe@egroups.com. You will then receive an email insrructing you how to join.

The Club also mainrains a list of members' e-mail addresses. This list is confidential and used only for Club purposes, e.g. for informing members of upcoming evenrs and news concerning the Club. It is nor divulged to anybody ourside the Club or used for commercial advertising. Ar present it includes addresses for abour 50% of the membership. Please send any additions or amendments to the membership secretary: membership@africanbirdclub.org.

Male Chestnut-bellied Sandgrouse *Pterocles exustus*, Marsabit, Kenya, 2005 (Kevin Vang)

Female Chestnut-bellied Sandgrouse *Pterocles exustus*, Marsabit, Kenya, 2005 (Kevin Vang)