looking AT LOCUSTFINCHES

VERONIQUE WOLFAARDT (3)

A pair of Locustfinches showing the marked sexual dimorphism typical of the species. In the bottom left image the strikingly coloured male shows the species' long, straight hindclaw, similar to that of a longclaw or Spike-heeled Lark, which helps it to walk on dense grass. This feature is mentioned in some descriptions of the bird, but not illustrated in most field guides.

We had long dreamed of visiting Mozambique in search of the specials found there, so we did not hesitate when in December 2012 we were afforded the opportunity to explore parts of that country.

Towards the end of our stay we headed off to the Rio Savane area in search of some of the grassland and wetland species we still had on our target list. We left the area satisfied with many of our sightings, apart from the notoriously difficult Locustfinch *Paludipasser locustella*, which had afforded us only fleeting glimpses on two occasions when it had been flushed from the grass. While driving on a dirt track leading out of the area, we noticed a tiny bird rise from the grass near a small pool of water. We slammed on the car's brakes and waited in anticipation on the off chance that the bird would return to drink in the near 50 °C heat.

We were astonished when, within a few minutes, a pair of Locustfinches dropped down into the grass close to the water. We held our breaths as a male and female emerged from the grass and hopped down to the puddle. For about five minutes we were rewarded with an unobstructed view of these beautiful, secretive little birds.

VERONIQUE WOLFAARDT & MATTHEUNS PRETORIUS

MATTHEUNS PRETORIUS

cold snack, ANYONE?

African Green Pigeons keep the heat turned up

Mammals and birds represent a striking example of convergent evolution, both groups having independently evolved endothermy (or 'warm-bloodedness'). But endothermy is an expensive strategy: large amounts of energy, and hence food, are required to fuel internal heat production. For this reason, many small mammals temporarily opt out by becoming hypothermic and lethargic, a process referred to as hibernation if it lasts for more than a few days, and torpor if it's of less than 24 hours' duration. Mammalian hibernators include many bat, rodent and small marsupial species, as well as tropical groups such as Madagascar's tenrecs and smaller lemurs.

Among birds, however, hibernation and torpor seem to be quite rare. Hibernation has been reported in just one species, the Common Poorwill *Phalaenoptilus nuttallii*, a member of the nightjar family. Although groups such as nightjars, hummingbirds and swifts routinely become torpid while roosting, these seem to represent more of an exception than a rule. Even in cold boreal environments where short days, limited food and extreme temperatures create conditions that are among the most inhospitable imaginable for small endotherms, none of the birds investigated so far uses torpor. Instead, they rely on behaviours such as food caching and communal roosting to survive the frigid winters.

One avian taxon that at first glance seems a very unlikely candidate for hibernation or torpor is the Columbiformes, the order containing the pigeons and doves. Yet in 2001 a paper was published showing that the Cloven-feathered Dove *Drepanoptila holosericea*, a large frugivorous species endemic to the Pacific islands of New Caledonia, routinely becomes torpid, lowering its metabolism and temperature far below normal levels while roosting at night.

Intrigued by these findings, a team from the University of Pretoria recently examined the possible occurrence of torpor in African Green Pigeons *Treron calvus*, an Afrotropical species broadly comparable in terms of both ecology and body size to the Cloven-feathered Dove. Honours student Matthew Noakes used miniature body-temperature loggers to examine how the birds regulated heat production at night. His data revealed that the green pigeons did not enter torpor at any time during the study period, suggesting that they differ fundamentally from the New Caledonian species in terms of their physiology.

ALBERT FRONEMAN

African Green Pigeons appear not to use torpor, probably because of the risk posed by nocturnal predators.

But why should a large, frugivorous, island columbid use torpor, whereas an ecologically similar species from mainland Africa apparently does not? A large part of the answer, we think, concerns predation risk. A hypothermic, lethargic bird is far more vulnerable to predation than when it is in a normal state of alertness; there are accounts from South America, for instance, of torpid hummingbirds falling victim to bird-eating spiders. Until the arrival of human-associated species like feral cats, New Caledonia's fauna did not include any species likely to pose a nocturnal threat to Cloven-feathered Doves. Thus the birds could presumably enter a lethargic state at night without the risk of being devoured by a prowling predator.

For the green pigeons, nocturnal carnivores such as genets and wild cats make the African night a far more dangerous place, and an inability to respond immediately to the proximity of a predator is likely to have fatal consequences. The physiological divergence between these two species may thus reflect the relative importance of predation risk in their respective evolutionary histories, with the benefits of torpor outweighing the costs only in environments where predation risk was low or absent entirely.

ANDREW McKECHNIE

Reference: *Schleucher, E. 2001. 'Heterothermia in pigeons and doves reduces energetic costs'.* Journal of Thermal Biology *26: 287–293.*

LONG-TAILED SKUA BARRIE ROSE

TUNDRA-BREEDING seabirds

The southern African connection

For many long-time birders, the 1978 fourth edition of *Roberts* was a watershed publication. It included Ken Newman's artwork, which heralded the advent of the modern birding era in southern Africa. And yet it didn't include the Long-tailed Skua *Stercorarius longicaudus*. It was only when Kurt Lambert reported his sightings from the Benguela region in 1980 that we began to appreciate the importance of southern Africa as a wintering area for this species. Since then, it has become clear that the species is common not only off the west coast, but disperses widely throughout the waters of the Agulhas retroflection, south of Africa, and well into the western Indian Ocean.

A new study provides fascinating insights into the movements of these long-distance migrants. Using tiny 'geolocator' light-loggers on adult Long-tailed Skuas, Olivier Gilg and colleagues tracked the movements of eight birds breeding in Svalbard and north-east Greenland (PLoS ONE 8(5): e64614). The skuas travelled south-west to the Grand Banks off Newfoundland, Canada, before continuing south through the central North Atlantic Ocean. Most came close to West Africa off Mauritania and Senegal, and several followed the West African coast into the Gulf of Guinea. Five even spent some of their midwinter residency period off the coast between Cameroon and Angola, which is surprising given that the species is virtually unknown from that region.

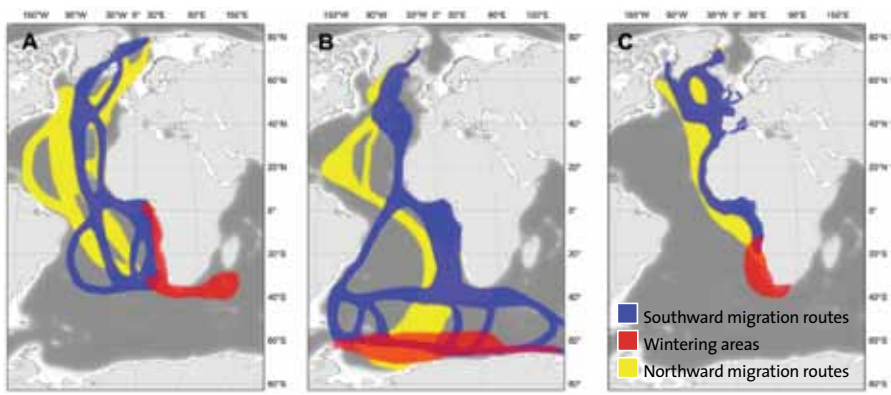
Not all individuals travelled south close to the African coast. A few remained well offshore in the central Atlantic, and one followed the classic sailing ship route, crossing to the Brazilian coast before following the prevailing westerly winds across the South Atlantic. But all eight spent the northern winter off Africa, ranging between the Gulf of Guinea and the waters south of Madagascar. This suggests that the birds seen in summer off Patagonia come from other populations, possibly reaching those waters from the Pacific Ocean.

On their return north, most birds travelled further west, with some almost reaching the Caribbean en route to the Grand Banks, whereas a few staged off Mauritania and north of the Azores before making the final dash back to their tundra breeding grounds. Their round-trip distance averaged close to 50 000 kilometres per year, and some birds travelled more than 500 kilometres per day on migration. Interestingly, they tended to travel faster on their southbound migration, which contrasts with many transequatorial migrants that tend to travel faster when returning to their breeding grounds.

The Long-tailed Skua is the third transequatorial migrant seabird tracked from its breeding grounds in the far North Atlantic. Arctic Terns *Sterna paradisaea* tend to follow one of two migration routes to reach their wintering areas off Antarctica, whereas all Sabine's Gulls *Xema sabini* hug the African coast to winter in the Benguela region. Gilg and his colleagues suggest that the skuas use a wide range of migratory routes because they tend to migrate with the terns and gulls, not least because they steal food from these species.

These studies confirm the importance of the waters off southern and western Africa for this suite of North Atlantic seabirds. Their persistence depends on our ability to conserve adequate resources for them throughout their vast ranges.

PETER RYAN



Comparative migration routes and wintering areas (in the austral summer) for Long-tailed Skuas (A), Arctic Terns (B) and Sabine's Gulls (C) breeding in Greenland and adjacent areas.

swift RESPONSE

A team from the University of Cape Town is studying the southern African population of Swift Terns *Thalasseus bergii* in order to better understand why its numbers have increased while many other Benguela seabirds have decreased in abundance.

During April 2013, 500 chicks on Robben Island, off Cape Town, were banded with alpha-numeric colour rings and metal rings. The researchers are requesting sightings of these birds to help in the bid to estimate survival and movement patterns in this species. Any records of colour-ringed Swift Terns (alive or dead) should be reported to *swift.terns@gmail.com*, giving as many as possible of the following details: the accurate location of birds (GPS coordinates if possible); date and time of sighting; colour of the ring; characters on the ring, for example A7 (the majority of the rings are top-down and all are on the right leg); age class (immature or adult); the number of the metal ring (if the bird found is dead).

The ring colours used are: yellow with black text; white with black text; green with white text; blue with white text. Some letters (D-F-G-I-M-O-Q-V-W) are missing from the colour ring codes. Any help will be appreciated.

Swift Tern chicks from Robben Island have been banded with individual, field-legible rings. These are often most easily read with a spotting scope or from photographs.