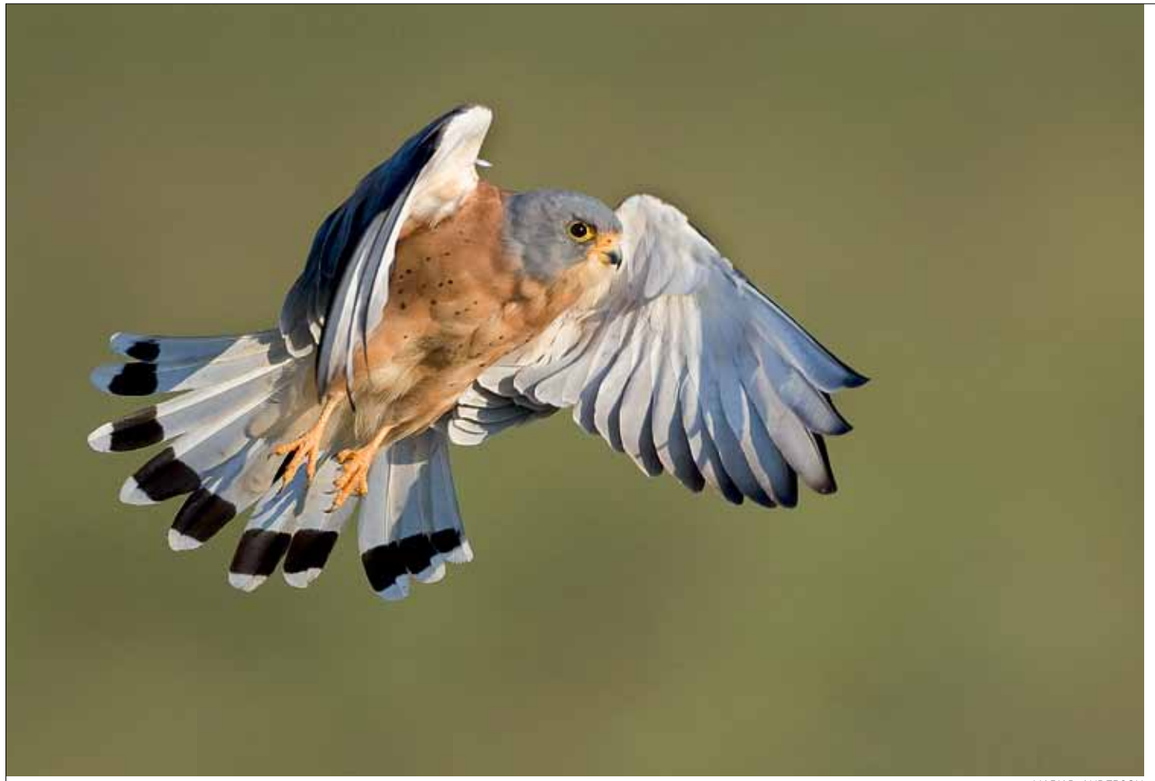
flashmob

KESTRELS IN THE **KAROO**

TEXT & PHOTOGRAPHS **ANTHONY VAN ZYL**

After leaving their roost in the early morning, the first stop for Lesser Kestrels is to warm up in the sun.



MARK D. ANDERSON

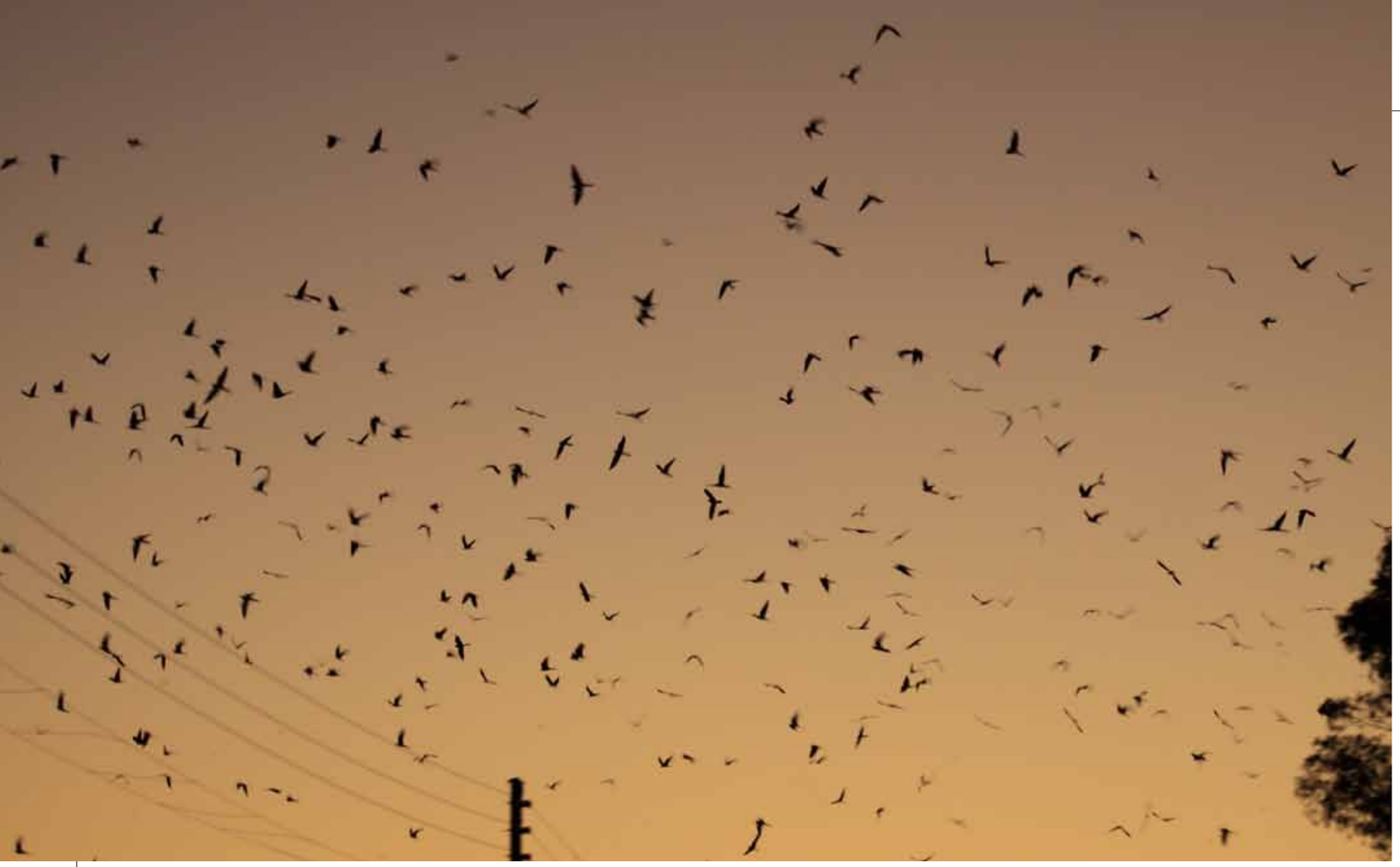
MY LIST OF 'RAPTOR WONDERS' of South Africa includes one of the highest densities of Peregrine Falcons in the world found in the Western Cape, a population of one of the world's rarest falcons, the Taita Falcon, in Mpumalanga, aggregations of large migrant eagles in the Kruger National Park, and raptor action at the Kgalagadi waterholes. But there is no doubt that at the top of the list are the huge flocks of Lesser Kestrels and Amur Falcons that roost in the trees of many small towns across South Africa during summer.

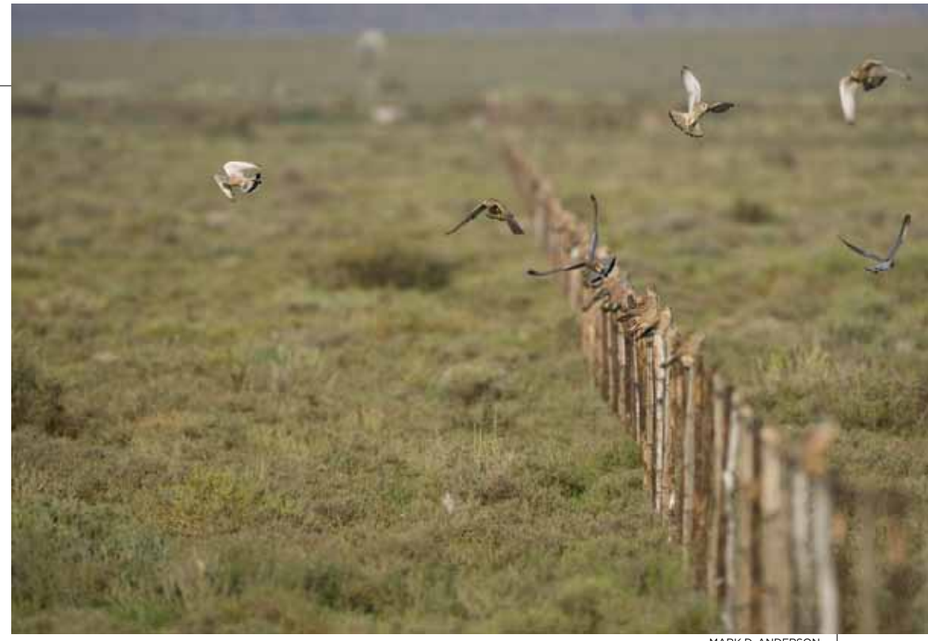
above *Hunting methods of Lesser Kestrels (adult male shown) include catching invertebrates by searching for them from a perch, by hovering, or taking insects in flight.*

opposite *At night, thousands of Lesser Kestrels congregate in their roost trees, perching close to each other in the canopy of the tree.*

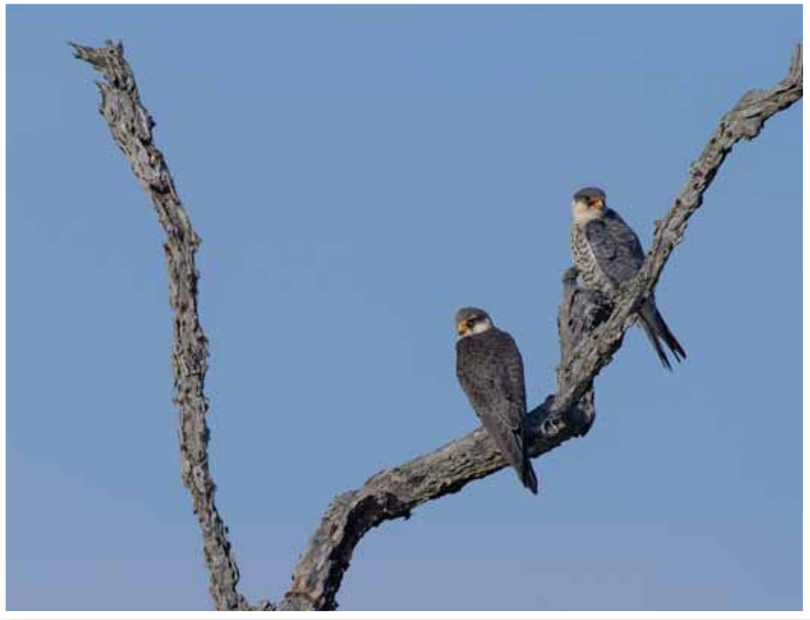
THERE ARE three species of small, hovering falcons that breed in Europe and Asia and overwinter in Africa. The bulk of the world's Amur Falcon *Falco amurensis* population migrates to southern Africa, while the globally vulnerable Lesser Kestrel *F. naumanni* and Red-footed Falcon *F. vespertinus* overwinter in West and southern Africa and south-western Africa, respectively. These falcon roosts form some of the largest raptor aggregations ever recorded; at one, in Newcastle in KwaZulu-Natal, as many as 28 000 Amur Falcons have been counted in one evening. One of the largest roosts in the Karoo is found in De Aar, and kestrel numbers there have been monitored for the past 15 years by volunteers of the Migrating Kestrel Project, supported by the Endangered Wildlife Trust's Birds of Prey Working Group. In the summer of 2012 an estimated 12 000 Lesser Kestrels were counted at the De Aar roost and I spent some time there to appreciate this extraordinary raptor phenomenon.

Arriving in De Aar during the day, there is little to indicate that thousands of kestrels roost there. The surrounding farmland consists of a mixture of dry grassland and Karoo bushes and is criss-crossed by a variety of fences, and by telephone- and power-lines. If you look carefully, you may notice a kestrel perched every so often on one of these poles, >





MARK D. ANDERSON



ALBERT FRONEMAN

above *The burst of hundreds of kestrels as they leave the roost in the mornings is a spectacular sight.*

opposite, top *Small groups of kestrels forage over the Karoo during the day, and use fences, telephone poles and power-lines as convenient perches.*

opposite, bottom *Small numbers of the migratory Amur Falcons also occur at the Lesser Kestrel roosts. The female Amurs (shown here) are easily separated from the plain grey males.*

although the birds are often difficult to see because they attempt to avoid the heat of the day by sitting in whatever shade they can find. Low rainfall and high temperatures have been shown to have an adverse effect on kestrel survival. For instance, in years of low rainfall in Africa, during which the birds' available food sources are reduced, half of the first-year kestrels, being inexperienced foragers, die of starvation while on migration in Africa. With temperatures increasing as a result of climate change, this could have serious long-term effects on the populations of these small falcons.

The spectacle begins in the late afternoon when the kestrels return to their roost in the town after spending the day foraging out on the De Aar flats. As dusk approaches, the clear blue Karoo sky gradually fills with falcons until the air above the town is a swirling mass of small specks, each an individual kestrel planning its roost spot. The activity is mesmerising as the birds switch between casual circling and fast, twisting flights across the sky. As the light intensity fades, so the birds lose height until their action centres around the roost trees, with hundreds of kestrels each trying to find a suitable perch. The way in which the large blue gum and pine trees seem to 'swallow up' the kestrels is impressive in itself as one would never guess that so many birds could be accommodated in a single tree.

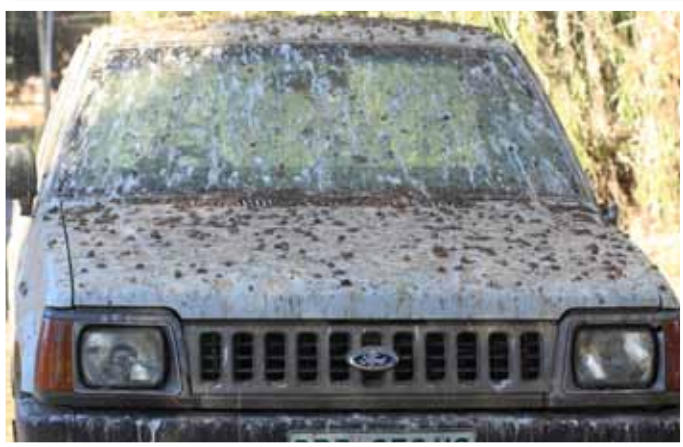
Interestingly, at Lesser Kestrel roosts only the occasional twitter is heard when there is a dispute for a particular perch. This is in direct contrast to Amur Falcon roosts where the birds' constant chatter causes the local townsfolk to complain about the noise.

To the inhabitants of De Aar, the daily roost spectacle is simply part of another summer evening in their town and their daily activities don't seem to affect the kestrels. However, with so much open Karoo space available to the birds, it begs the question as to why they choose to roost together, and especially in well-lit public places in towns.

There are several theories as to why birds are social, but the two main reasons are to improve their chances of finding food and to reduce the risk of predation. The chances of finding food are increased by following other individuals to food sources, by roosting close to available supplies, avoiding areas that have been depleted of provisions, and even by using the roost as an 'information centre' where areas of abundance can be communicated to others. The risk of predation can be reduced by improved predator detection with many more eyes to spot potential threats, having safety in numbers, 'the confusion effect' which involves many individuals flying around in a flock, and 'group resistance' in which there is an abundance of individuals to repel predators.

To date, no one has studied the roosting behaviour of Lesser Kestrels in South Africa so these questions cannot be answered with scientific certainty. One possible clue lies in how the kestrels leave the roost. Karoo mornings are characterised by a feeling of anticipation – the town has yet to wake up and the roosts are quiet and still. However, as it gets lighter, there is a tension in the air and >

above *Roosts in towns are well illuminated by street lights, giving the kestrels good visibility (and thus presumably increased predator detection) throughout the night.*



right *Visitors to these Karoo towns take note: don't park your car overnight under these seemingly innocuous trees!*

the occasional early-rising kestrel can be seen zigzagging across the sky. Then, without warning and as if triggered by a silent alarm, a huge flock erupts from the roost trees and the sky fills with thousands of birds. At large roosts, there can be several waves of these eruptions, from the same and different trees. While the bulk of the kestrels may move off in a similar direction, staying together is only temporary because, after a quick warm up in the early morning sun, they scatter over a wide area. In fact, they disperse so widely that, after seeing thousands at the roost in the early morning, it is not easy to find aggregations of more than 20 kestrels during the day. As kestrels find it best to spread out across the whole area, it suggests that helping each other to find food is not the reason for their being social.

The answer to the roost question probably revolves around predator avoidance. Although predation has not been well documented at roosts and urban environments are not predator free with the abundance of cats and owls prevalent in these areas, the bright street lights could make nocturnal predators more easily visible to the birds. In South Africa, the greatest number of mortalities recorded at roosts have been caused by lightning or hail, while in the birds' foraging areas cars are the most significant killers.

Every year the scientific community documents new raptor migration routes. The course followed by Red-footed Falcons moving between eastern Europe and south-western Africa, Lesser Kestrels between western Europe and West Africa, and the 14 000-kilometre trip by Amur Falcons between South Africa and China have now been accurately tracked. However, we still do not know if the Lesser Kestrels from the Karoo take the same risks as their Amur Falcon cousins, which fly for three days non-stop across the sea on their way back to their breeding grounds. There are still many answers locked in these spectacular kestrel roosts in the Karoo. ◆