LESSER KESTREL ALBERT FRONEMAN

sahara ODYSSEY

Satellite transmitters reveal the secrets of Lesser Kestrels' migration

Lesser Kestrels *Falco naumanni* are familiar summer visitors to the central parts of southern Africa, and are well known to birders for the flocks of thousands that fill the evening sky before the birds settle in a communal roost tree for the night. The fortunes of this small falcon, whose breeding range covers a vast swathe of Eurasian steppe and grassland from the Iberian Peninsula to China, have recently taken a turn for the better. After being red-listed as Globally Vulnerable for several decades, it has now been down-listed to Least Concern.

Spanish ornithologists recently provided intriguing insights into the movements of Lesser Kestrels migrating between Europe and West Africa. They fitted miniature satellite transmitters weighing a mere five grams to five kestrels caught on the breeding grounds in south-eastern Spain, where the birds nest in abandoned farmhouses. The minuscule weight of transmitters reflected the fact that batteries, traditionally the primary power source for such devices, were eschewed in favour of tiny solar panels that provided practically infinite sources of energy.

The kestrels carrying transmitters began moving south from their breeding grounds in late September and early October, first flying about 180 kilometres over the Mediterranean Sea while making the crossing from Spain to North Africa. This in itself was slightly surprising, given that many migrants avoid flying over water. Had the kestrels made the crossing slightly further west at Gibraltar, they would have faced a much shorter over-water distance of just 15 kilometres.

Once over African soil, the individual birds took very different routes to their wintering grounds in Senegal, southern Mauritania and western Mali. One female flew south-west, roughly parallel to the Moroccan coast but several hundred kilometres inland, before turning south over Western Sahara and the interior of Mauritania. In contrast, two males both veered sharply to the south-east shortly after crossing the Mediterranean, with their subsequent flight paths describing vast arcs over southern Algeria before curving back to the west over Mali. Several of the birds appeared to actively detour around the point where the borders of Mali, Mauritania and Algeria meet, an area that is notorious for frequent sandstorms.

Compared to the southward migration in autumn, the return trip in spring was a more direct affair. The kestrels tracked the coastline of Western Sahara and Morocco for at least part of their journey, with only one bird following a completely inland course over Algeria. Another striking difference between the southwards and northwards migrations was that the majority of the kestrels crossed back into Europe at Gibraltar, instead of making the same long over-water flight as the previous autumn.

In addition to providing detailed, high-resolution records of the movements of the kestrels while they were migrating, the study revealed the exact areas occupied by the birds during the non-breeding season. This kind of information is vital, because the Lesser Kestrel is one of many species susceptible to poisoning by pesticides used for controlling locusts. Recent decades have seen considerable intensification of agriculture in the Sahel region, and studies such as this one contribute significantly to the development of mitigation strategies for reducing the impacts of pesticide use on locust-eating birds.

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Reference: *Limiñana, R., Romero, M., Mellone, U. and Urios, V. (2012) 'Mapping the migratory routes and wintering areas of Lesser Kestrels* Falco naumanni*: new insights from satellite telemetry.'* Ibis *154: 389–399.*