fast food failure

KERVIN PRAYAG

JESSLEENA SURI

Urbanisation is a growing threat to biodiversity, which has numerous impacts on organisms, including birds. With human activity more and more centred in urban areas, there has been an increase in human food discards. The ability to exploit such discards is a major factor contributing to the successful colonisation of urban areas by animal species such as house mice, rats, Rock Doves, House Sparrows and Common Starlings. But does this come at a cost to the animals? Fast-food snacks like sandwiches, wraps, muffins and chips, which are rich in carbohydrates, are not very healthy for humans; do they create problems for our urban commensals?

As we reported in the September/October 2018 issue of *African Birdlife*, the Red-winged Starling, whose natural diet consists mostly of insects and berries, has readily adapted to eating human junk food at the University of Cape Town (UCT). Although these starlings primarily nest on cliffs, they have adjusted to nesting on buildings and many pairs have bred on the UCT property since the 1940s. Intelligent and fearless, they rule the roost, so to speak, on campus, scavenging food dropped by students, retrieving it from rubbish bins and sometimes stealing it from unsuspecting hands.

A recent study by researchers from the FitzPatrick Institute (Catto et al. 2021, *Oecologia* DOI: 10.1007/s00442-021-05033-3) indicates that breeding adults seem to manage quite well on this energy-rich diet, while their nestlings face negative consequences. When adult starlings exploit high-calorie human scraps on weekdays during term time, they gain body mass without increasing the time spent foraging or the amount of food consumed. On weekends and during vacations, when their supply of junk food is greatly reduced, they barely manage to maintain body mass or they even lose weight.

In contrast, junk food appears to disadvantage Red-winged Starling nestlings. Those that were fed a diet that included large amounts of human food scraps tended to be smaller and lighter when fledging than nestlings fed more natural food items. This pattern seems to be common among urban nestlings, whose early-stage growth and development is often dependent on a protein-rich diet, traditionally sourced mainly from invertebrates. Nutritional deficits in early nestling developmental stages can negatively influence multiple health traits, including cognitive skills, probably impacting subsequent survival and breeding performance.

While these results are not encouraging for the long-term persistence of UCT's starlings, the population does not show any obvious signs of decreasing. Our plans to monitor the longer-term impacts of a diet rich in junk food on the population were scuppered by the Covid-19 pandemic. Without students on campus, the supply of food scraps has largely dried up. This had a direct effect on adult starlings, which weighed on average three per cent less in the winter of 2020 compared to the preceding two winters. We are still assessing whether their nestlings are fledging at a larger size thanks to a healthier diet.

SARAH CATTO AND SUSIE CUNNINGHAM

above, left *A colour-ringed Red-winged Starling examines a discarded muffin wrapper.*

above, right *Starlings weigh themselves for the Fitztitute's ongoing study into the impacts of junk food.*

For more information, contact
The Director, FitzPatrick
Institute of African Ornithology,
University of Cape Town,
Rondebosch, South Africa 7701.
E-mail *fitz@uct.ac.za*,
tel. +27 (0)21 650 3291 or
visit *www.fitzpatrick.uct.ac.za*