## vampire ravens

Geospiza difficilis on a few of the Galapagos Islands, where they peck open the growing feathers of boobies *atratus*, sheathbills and skuas peck at to drink their blood. Oxpeckers also drink blood from wounds on large ungulates and have been reported to keep wounds open to maintain this food



above The bloody, tick-infested cow udder from which an adult and juvenile Whitenecked Raven appeared to drink.

top An adult raven perches on a cow, which seems totally relaxed.

lood-drinking by birds is per- source. Indeed, the jury is still out on haps best known among the whether oxpeckers are more of a boon Sharp-billed Ground Finches to or a parasite on their ungulate hosts. Other opportunistic species such as New World Black Vultures Coragyps wounds and may occasionally drink blood. However, this is a fairly unusual behaviour and I could find no records for African birds other than oxpeckers.

> On 5 December 2019 I observed a family of White-necked Ravens feeding among a herd of cows on the beach at the Ntafufu River Mouth in the Eastern Cape, north of Port St Johns. The group comprised two adults and three juveniles, which could be distinguished by their slightly smaller bills, pinkish gape, mottled rear border to their white neck and higher-pitched calls. The ravens moved among the cows, often perching on them and apparently gleaning ticks. Ravens regularly glean ticks from cattle in this area (Costello 2006, Africa – Birds & Birding 11(6): 16-17) and recently a raven was observed gleaning from eland at Cape Point (Ryan and Lee 2019, Promerops 315: 24).

However, I was intrigued to see two ravens, an adult and a juvenile, seemingly drinking from the udder of a cow that was lying down. Both birds repeatedly bent down and then raised their heads to swallow, in the manner typical of drinking passerines. The pair moved off as I approached to get a better view, but the cow remained lying down and I was able to get a good look at her udder before my presence caused the beast to stir. The udder was heavily infested with large ticks and had several bloody wounds, including one oozing a pool of blood large enough to drink. I surmise that the ravens were drinking this blood.

The cow was not incapacitated, because she got up when I was within about 10 metres of her. It is possible that the ravens pulled off some ticks, creating the bleeding wounds, but the cow showed no signs of distress when the birds were feeding from her. An adjacent cow also had many ticks and several bloody sores on her udder, suggesting that this was not an isolated incident. PETER RYAN



in the imagination in South Africa: it's an arid, seemingly endless and empty world. However, an extraordinary number of bird species - nearly 400 - make use of the Karoo, either passing through or entirely restricted to this biome (no fewer than 10 species are endemic) (Dean, 1995). This diversity is a consequence of the variety of rainfall regimes, from winter in the west to summer in the east, and as a result of the variation in landscape, ranging from plains to mountain escarpments.

Most of the Karoo is owned by smallstock farmers working with goats and sheep. Successful farmers in this harsh landscape, where you can experience roasting heat one day and snow the next, need to look after their lands to ensure that there is sufficient forage for their animals. This is good news for most bird species and many also benefit from the provision of water for livestock (Lee and Wright, 2019).

Dams and reservoirs teem with waterbirds and birds coming to drink. Certainly, seeing the abundance and diversity of birds around water in the Karoo is a treat after kilometres of empty scrublands, home to only the occasional Karoo Chat or Rufous-eared Warbler. For an arid environment, it is

The Karoo captures a special place surprising how many bird species rely seemingly endless drought. Waste wadirectly or indirectly on water - up to 45 per cent of 315 species that regularly occur in the Karoo (Lee et al., 2019). In addition to waterbirds, species that mostly eat seed also need to drink regularly and many other species do so opportunistically. However, some associations are not so obvious; for instance, the swallows and other species that use mud to build their nests or the many species that roost in reed beds. Also, as we know from sandgrouse, some species will travel great distances to obtain water.

Increasingly, the Karoo is viewed as being ripe for exploration and development, and mining and alternative energy facilities are proliferating. A more sinister development threat has been over-shadowing livelihoods in the Karoo for the past while: fracking (hydraulic fracturing for underground gas). Fracking uses vast amounts of water and produces large quantities of waste water laced with a potentially lethal cocktail of chemicals. The threat to underground water resources from both exploration and contamination is a huge concern to most landowners. Water is life and never is this more

obvious than in an arid environment, especially in the recent years of

CAPE SPARROWS ALANIE

## A poisoned chalice in the Karoo

ter needs to be properly managed according to existing legislation, but how (and if) this will be done correctly remains to be seen. Animals desperate to drink often make a plan; porcupines are renowned for chewing open water pipes in the Karoo in their quest for water and thirsty birds will often drink in the presence of their predators. In short, great attention needs to be paid to the likelihood of any water sources in arid environments being contaminated - they could potentially wipe out local populations of some of southern Africa's most interesting birds. ALAN LEE

References

- Dean W.R.J. 1995. Where birds are rare or fill *the air: The protection of the endemic and* nomadic avifaunas of the Karoo. University of Cape Town.
- Lee A.T.K. et al. 2019. 'Vulnerability of birds to contaminated water sources in the Karoo region of South Africa', Ostrich, 90(4): 397-406. DOI: 10.2989/00306525.2019.1638846.
- Lee A.T.K. and Wright D.R. 2019. 'Patterns of bird species richness at two sampling scales in the Karoo biome of South Africa. Journal of Arid Environments. Elsevier, p. 104077.