## The Bird That Guides - By Malcolm Smith

I can't blame Google. Type the words 'bird guide' or 'bird guiding' into its search facility and up come reams of wildlife holiday companies and other guided birdwatching holidays. But something else appears too, though maybe not until the second or third page, Honeyguides.

I had known a little about these unusual birds for years – that they can guide people to wild bee nests – but that was about all. When I was researching my book, Life with Birds: A story of Mutual Exploitation (Whittles, 2011), I needed to tell the whole story because they are arguably the only birds in the world that do guide people to food resource, one that benefits them (because, very unusually, they eat bee honeycomb) and the person it leads because us humans have a rather soft spot for honey.

There is one other bird in the world that, it claimed, will act as a guide: the Northern Raven. Found across the northern half of the globe throughout Europe, northern Asia, the USA and Canada as well as the even more northerly Arctic area, ravens are very successful and very intelligent- birds. What is undisputed is that the brains of ravens count among the largest of any bird species and that they display considerable ability in problem-solving, as well as other cognitive processes such as imitation and insight. A biologist, Bernd Heinrich at the University of Vermont in the USA, has catalogued the evidence to support the notion that ravens sometimes guide hunters. After all, the birds are as keen to get a caribou kill as the hunter that has just shot one. Butchered on the spot, the entrails are usually dumped for ravens to feed on. In his book Mind of the Raven (Harper Perennial, 2006) he suggests that ravens in the Arctic signal to the hunters – by tucking in one wing momentarily as they fly or by making a certain call – to indicate that prey such as caribou are nearby. If the signaling raven then flies off in a certain direction, the hunters might rightly presume that the animals are that way. He doesn't have objective proof but, if Heinrich is right, and his idea is based on anecdotes from Inuit hunters on ice-bound Baffin Island in the Arctic between Greenland and the very north of Canada, then both the ravens and the hunters gain. Heinrich rewrites:

Abe Okpik, and elderly man who was no longer a hunter ... later had told me that when out on the land hunting caribou, or out on the ice hunting polar bear, a hunter seeing a raven fly over used to look up and call its name loudly three times: 'Tuligaq, tuligaq, tuligaq'. Having the bird's attention, he would then yell to it, telling it to tumble out of the sky in the direction of the prey. If the raven gave its going-like call three times in succession, then the hunters went in that direction. "They believed in the raven strongly, and followed it,' said Okpik. 'And after they killed the caribou or the bear, they always left the raven the choicest tidbits of meat as a reward.'

Far-fetched? Don't believe it? I wasn't sure either. Until, that is, I spent time with a Kenyan Dorobo tribesman who frequently uses honeyguides to get to wild bee nests.

I had made contact with Luca Borghesio, an Italian biologist who was researching how subtle changes to a huge, isolated and not well-known forest in the Mathews Range of Central Kenya was affecting its bird population. Working with him was a Dorobo tribesman called Robert Lentaaya who had considerable experience amount of first-hand information from Lentaaya, including some experience never before recorded. But more of that later! I used a great deal what Robert Lentaaya told me via Luca in my book, Life with Birds. In the partly forested hill country a few hundred kilometers north of Kenya's capital Nairobi, the Ndorobo people have retained much of their hunting and hunter-gatherer culture. Moved out of their traditional forest environment in the 1970s to try and force them to settle and become cattle farmers like their Samburu neighbors, many have clung to living closely with the wildlife they have always exploited sustainably.

Robert, a Ndorobo with a family to support, lives in the Karissia Hills about 300 km north of Nairobi. Like all Dorobo, he isn't at all sure when he was born (time is not important) but he knows precisely in which forest cave he was born because a sense of place is what matters. So Robert isn't able to say precisely how old he is but he appears to be in his forties. His animal tracking skills, his knowledge of edible plants and his ability to identify a wide range of forest creatures is second to none. And like many Dorobo people, he frequently makes use of honeyguides - rather drab, thrush-sized, olive-green and brown birds - to guide him to bee nests.

My opportunity to participate in this amazing bird/human partnership came about a couple of years later. Luca had invited me to their summer camp in the Mathews forests; Robert Lentaaya was to be there too. I spent ten days with them camping in one of the most isolated locations - apart from the Sahara - I've ever camped in.

A couple of days into my forest visit and I had staggered back to the campsite after a morning's hard walking (accompanied, as always away from camp, by two of our Samburu helpers, one of them armed in case we encountered anything dangerous such as African Wild Cattle). Lentaaya, as everyone referred to him (rather than his Christian name), was agitated. 'Ah, Malcolm, it is a pity you were not here because a honeyguide came to the camp and stayed all morning calling to me. But I told him we could not go with him until you were back. And now he has gone. We will go to see if we can find him,' he said.

So began one of the more surreal half hours I have experienced. We traipsed around the forest just behind our camp with Lentaaya talking loudly and shouting in all directions in his Dorobo language. He explained to me that he was asking the honeyguide for forgiveness; we were apologizing for not helping him, for making him stay around the camp when he wanted to lead us. Unfortunately, the appeals didn't work. This honeyguide had clearly taken the huff. After half an hour of trying to coax him back, Lentaaya gave up.

We were to wait another couple of days before we would encounter another. It happened as a small group of us were well away from camp sitting down for a rest on some boulders at the side of the little Ngeng River. The only sound I could hear was from the water tumbling over a unable of stones. Lentaaya, with his much more acute hearing, sensed a very different sound.

Malcolm, a honeyguide; look up there in that tree. And just a couple of metres above us, there it was. Clearly agitated, the bird was hopping excitedly from one twig to another flicking its white-edged tail and calling incessantly, a persistent, double call to attract attention, a harsh, rattling chatter of a noise. It is the sort of noise, close by, that's hard to ignore. Suddenly, it was all I could hear; the noise of the stream had somehow faded out my senses. We didn't delay. We were up and off; the honeyguide led, all the while chattering and flicking; flitting ahead from branch to branch, past trees encased in vine stems and other climbers. And throughout, Lentaaya was calling back to the bird, keeping in touch with as it led the way.

Not once did we lose sight of the honeyguide. And not once did we fail to hear it call. Never more than 10 m or so ahead of us, this bird had no intention of losing us amongst the trees and shrubs and route to the

bee nest I presumed it needed us to open. Lentaaya led with me in tow crunching through the brown leaf litter for maybe 300 m until we reached a big forest tree, perhaps 30 m high. It was certainly very tall.

The honeyguide was a bit less agitated; it had changed its call - softer in tone and much less persistent - and the bird stayed put on low branches next to this formidable tree. No longer was it flashing its white tail feathers; it had reached its destination ... and seemingly ours. Lentaaya's responses became muted, and from high in the tree canopy above us we could hear the loud hum of wild bees like a not-too-distant moped at full throttle. Unlike a moped, this hum sounded distinctly vicious.

But the huge tree with its smooth vertical trunk was impossible to climb without ropes and other equipment. Lentaaya was clearly disappointed. My response was more mixed; I was desperate to experience a bee nest being opened and the honeyguide being given some honeycomb as its 'reward' but I have to admit to some fear of a horde of aggressive wild bees descending in my direction.

Our honeyguide, though, was much more single-minded. It was very obviously irritated at our ineptitude. Big style! As we walked away reluctantly, Lentaaya talking to it all the while, it flew from branch to branch just above our heads, calling wildly and incessantly, flicking is wings and tail again, trying its level best to entice us back to the bees. We had the audacity to leave this clever bird in the lurch; we were walking away and nothing Lentaaya said to it - and he talked to it all the time - was going to soften the blow. The honeyguide followed us, keeping up its noisy appeal until we had walked more than 50 m away. And we could still hear it chattering in the distance as we headed slowly back to camp. I felt we had let it down.

The honeyguide human relationship has probably been in existence for thousands of years. though is origins are a mystery. And there is an awful lot that isn't well known about this south of family of birds. There are 17 different species, all but two of them found in Africa south of the Sahara. The other two occur in Southern Asia south of the Himalayas. Some of the African honeyguides that live only in forests are so rarely seen, even though they might not be uncommon, that very little is known about them. And two of the species were only discovered during the last 50 years. The best known is the Greater Honeyguide, the one we had been following; a brown, black and dirty cream colour, similar to a very large sparrow, and with the male possessing a slightly chubby pink beak. Most experts believe that this is the only honeyguide known to guide people to a bee's nest. Lentaaya's day-to-day experience, though, is very different. He told me that while every Samburu knows about the lodokotuk (Greater Honeyguide) and its guiding behavior, only Dorobo people can use other honeyguides, the silasili (Scaly-throated Honeyguide) and the airiguti (Lesser Honeyguide) as they are known to the Samburu.

'When we meet a giochoroi (the general Samburu name for all honeyguides) the Dorobo start singing a particular song to invite the bird to show them the way to the nearest bee nest. We have a different song for each species. The song for the lookout is a joke that asks the bird to lead us to the bees and requests it not to show the way to other Dorobos. The song for the silasili and the airiguti refers to them as a girl because their are voices are softer than that of the lodokotuk,' he said. It is this differentiation between the responses used by the Dardo - depending on which species of honeyguide turns up - that I can't find any mention of in the scientific Literature. 'But,' Lentaaya added, 'the lodokotuk is the best guide, The other two we use but they are not as accurate because they don't take us close to the bee's nest entrance and because they are less reliable at guiding. I collect about ten litres of honey in a year and sell it for about 2000 Kenyan shillings ( $\leq$  15) so I can pay for school fees for my children.'

What has long been established is that honeyguides are always attracted by human sounds. whether it is talking, chopping wood, cooking or something else. At a campsite they will often come very close, inspecting the tents and other equipment. They are certainly extremely curious birds.

But why, you might reasonably ask, does a honeyguide need people to break into the bee's nest in the first place? It is because they don't have large, strong beaks capable of doing the job themselves and because, in spite of having thickened skin, presumably to give them some protection, they are still vulnerable to being stung. Often, too, the bee's nest is in an awkward spot: a cleft in some rocks for instance which is hard enough for a person to get access to and to which a honeyguide stands no chance of breaking in alone. Honeyguides have been seen in the cool early morning scraping bits of honeycomb at a nest they can partly access, presumably only then when the bees are still rather cool and dopey. But they have sometimes been found dead, too, and always close to a bee's nest, killed by an overwhelming bout of bee stings. Meddling with wild bees can be a dangerous business.

So why eat bee honeycomb in the first place? For some unknown reason, honeyguides are particularly keen on a meal of wax and they are some of the few birds in the world that can digest it. They do eat other things, mainly spiders and a wide range of insects, including scale insects which have a waxy covering, as well as some fruits like figs. And when they gorge on honeycomb they are, of course, also eating quite a lot of bee eggs and grubs at the same time.

Dr Hussein Isack, an ornithologist at the National Museum of Kenya, Nairobi, is a honeyguide expert. He told me about his three-year research in northern Kenya in the mid-1980s where he found that 96% of wild honeybee nests were accessible to the birds only after people had opened them up first. So these birds have a lot to gain from their human relationship. He also found at tribesmen took an average of nearly nine hours to find a bee's nest without any help from the birds but just over three hours when guided. And that was a conservative estimate of the time difference because it didn't include days on which no nest was found, something that was rare indeed when the birds were doing the guiding.

This close inter-relationship between birds and people has probably been in existent for thousands of years. There are written accounts of it in the 17th century and early religions missionaries in Africa were surprised by birds that came to their altars and took pieces of wax from their beeswax candles. In Asia, 3rd century Chinese scribes wrote of "little birds of the wax combs based on reports about the Yellowrumped Honeyguide of the Himalayas, though they are not known to guide.

So how might their guiding habits have begun? There have been suggestions that the honeyguide/human link-up derived from a similar relationship between honeyguides and Ratels (Honey Badgers), attractive grey and black badgers common in much of Southern Africa. Very fierce mammals, Ratels can easily kill snakes, even venomous ones, amongst other animals. But they also have a liking for beehives and wild bee nests. Many experts doubt the badger/honeyguides mutualism because there are few or no confirmed sightings, at least not confirmed by Western eyes! Robert Lentaaya, though, is quite sure; he told me that he has seen a Greater Honeyguide leading a Ratel on several occasions. And I most certainly have no reason to disbelieve him.

A couple of days before I was due to leave the Mathews Range, another honeyguide made a chattering appearance very close to our campsite. And Lentaaya started talking to it, calling me over at the same time. We were off! This time I could more easily see the flicking tail as we walked fast under the forest trees and around some patches of impenetrable scrub. We even had to cross the Ngeng River to follow it,

hopping from boulder to boulder but never losing contact with our guide. The bird very obviously slowed down at times to wait for us to catch up. Another couple of hundred metres, up a steep, wooded slope on the far side of the river and the chattering eased, the bird stayed in one spot and the characteristically loud hum of a colony of bees began to dominate the stillness. We spotted their nest only a metre or so above the ground on a rocky outcrop under the forest canopy. And, as Lentaaya cut a large branch from a nearby tree and trimmed it with his knife to make a sturdy straight pole, the honeyguide watched from some low branches just above us.

But first, the vital task of pacifying the bees. Lentaaya gathered together a large bunch of twigs and dry vegetation, tied it into a torch-shaped bundle, lit the end of it with a lighter he carried and blew out the flame. Carrying the smoking firebrand to the rock cleft where the bees were, he wafted it to and fro, subduing them just as a commercial beekeeper would. The humming quietened.

Then it was time for more physical action. He quickly jammed the pole into the nest entrants between pieces of rock, prised it suddenly to one side and, with an audible crack, the rock split open to reveal a cloud of highly agitated bees. I stepped back, fearful of stings. Lentaaya smoking firebrand in hand and seemingly oblivious to any stinging, thrust it into the nest, drugging the bees quicker than I dare imagine was possible.

Quickly, he grabbed most of the honeycomb, depositing it in a bag he had carried with him. A small piece he threw on the ground nearby, and off we went. By now the bees had recovered; they were distinctly agitated once again, the smoke drugging rapidly wearing off. Their collective hum had become a threateningly loud drum-roll, and I for one was relieved that retreat was the distinctly more sensible form of valour. A little distance away we stopped to look back at the bee nest site. With binoculars we could see the honeyguide on the ground pecking away at its piece of honeycomb; silent now as it ate its fill of the food. The only sound was that of the highly agitated bees, their nest largely destroyed and a rebuilding or relocating task in store for them. No wonder they were buzzing loudly.

It had been an amazing experience; a huge privilege accompanying Lentaaya. Within a generation, though, this astounding and unique relationship between honeyguides and people might well be confined to history and story-telling. Few people, even among the Dorobo, now bother to follow the birds to honeycombs because many people now raise bees in hives at home. As people the world over become more and more distanced from a way of life in which nature is part of their everyday existence, such close relationships will become rarer still. Most will die out.

The birds themselves, too, might well decline as more and more woodland is felled for fuelwood and not enough is planted to replace it, although the best guider, the Greater Honeyguide, is a bird not of forest as much as more open ground with scattered trees." Nevertheless, trees are essential for these birds. They are often the location for the bee nests they crave. And older trees with rot holes and other cavities are the breeding places for barbets, starlings and woodpeckers in whose nests honeyguides lay their eggs, cuckoo-like, and let these foster families do all the hard work of raising their young for them.

No parental responsibilities, helpers to get much of their food, and lots of honey to eat into the bargain. Maybe it's not a bad life being a honeyguide after all.