

# POSSESSED

## *Black Sparrowhawks and Egyptian Geese vie for nest sites*



ANN KOESLAG

The Black Sparrowhawk *Accipiter melanoleucus* is a recent colonist of the Cape Peninsula in the Western Cape, with nesting being recorded here for the first time in 1993. During the past 20 years the population has grown to at least 50 pairs, and since 2001 it has been closely monitored by Ann Koeslag and her team from the Percy FitzPatrick Institute. As part of this project, we often visit the nests to ring the chicks when they are three to four weeks old. Now, however, new technology has allowed us an unprecedented insight into what happens earlier in the breeding cycle and just what the sparrowhawks have to endure simply to reach the stage of having chicks at all.

To observe the sparrowhawks, we have been using battery-powered nest cameras designed over the past 10 years by Nigel Butcher of the Royal Society for the Protection of Birds in the UK. The cameras are housed in waterproof units that are small enough to be installed close to breeding birds without disturbing them. They have low energy consumption and contain small infra-red LEDs, which allow us to record in low light and at night. They also have motion detectors, so that information is recorded only while

there is activity at the nest, thereby saving on memory and power. Another useful feature of the cameras is that once installed they can be programmed and the series of still images recorded onto memory cards can be downloaded from a unit connected to the cameras via a cable, without having to move the cameras and disturb the birds.

Excitingly, this is the first time that this type of camera has been deployed in South Africa. After spending countless hours on the ground monitoring the nests of these secretive raptors, often uncomfortably

crouched in a bush behind a spotting scope, we now find it incredibly rewarding to achieve a bird's eye-view of the activities at the nests.

We deployed our first nest camera in June 2012, waiting nervously at the base of the tree as our intrepid tree climber, Mark Cowen, hoisted the small device some 30 metres up into position above the large stick nest. On the nest, a hefty female Black Sparrowhawk fiercely stood guard over her clutch of two eggs. With wings flared, she unmistakably signalled her refusal to budge or abandon her nest, despite the human intrusion. As Mark secured the camera to a branch above the nest, we connected and turned on a mobile monitor on the ground below to get a first glimpse of the events unfolding in the tree top directly above us.

Although the bird's intention of protecting her two eggs from our climber was impressive and certainly clear, most reassuring was the fact that she resumed her incubation straight after Mark began to descend the nest tree. This was the start of many remarkable shots and scenarios we were able to view and record with the use of our miniaturised 'spyware'. The nest cameras have allowed us, for the first time, to peer unnoticed into the secret, tree-top lives of the sparrowhawks.

Not only have we been able to monitor prey provisioning by the adults and the development of chicks, we have recorded a variety of interactions between the sparrowhawks and other species. Notable among these is Egyptian Goose *Alopochen aegyptiaca*, whose numbers have also increased dramatically on the Cape Peninsula in recent years.

A previous study found that the greatest influence on sparrowhawk breeding success was whether or not pairs suffered by having their nests usurped by Egyptian Geese. We have known for some time that the geese, themselves on the lookout for ready-made nest sites, are capable of



appropriating sparrowhawk nests, but we had no idea of the true intensity of this interaction. From our camera footage it soon became evident that the geese and the sparrowhawks are well and truly at war with one another. This is not a case of the geese sneaking onto an unoccupied nest; it is out-and-out, in-your-face aggression, with pitched battles occurring on the nest platform.

Viewing a pair of Egyptian Geese as they work in tandem to maul and harass a breeding female sparrowhawk in an attempt to drive her off the nest can be disturbing, particularly when you have monitored that same female's breeding efforts over the years and have grown to have a certain level of compassion and affection for her. At the same time it gives you a new respect for the lengths to which these birds will go to protect their reproductive investment.

But the cameras are not there purely to document these 'sparrowhawk wars',



dramatic as they are. The Black Sparrowhawk is particularly interesting from an evolutionary ecology perspective because it is polymorphic, with individuals having either dark or light plumage on their breasts and underwings. The population on the Cape Peninsula is very unusual in that the majority (80 per cent) are dark morphs, whereas in the rest of the species' southern African range this is the rarer form. One theory proposed for this difference is that in the Western Cape the sparrowhawks breed in winter when it is often

wet and overcast, whereas in the rest of their range they are dry-season breeders.

We are exploring the possibility that dark birds will deliver more food to the nest on days with higher cloud cover or rainfall. To do this, we are examining whether foraging success varies between birds of different colours in relation to environmental conditions, in particular cloud cover or rainfall. Hopefully, the nest cameras will provide us with the data we require to test this question in a rigorous manner.

GARETH TATE & ARJUN AMAR

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**Opposite** A powerful maternal instinct. This female Black Sparrowhawk shows surprising determination to protect her clutch and nest from an intruding climber.

**Above, left** A marauding Egyptian Goose signals its aggressive intentions on a Black Sparrowhawk nest.

**Above** Caught on camera: an incubating female Black Sparrowhawk desperately defends her nest and eggs from an Egyptian Goose.

**Left** Well worth the effort. The second chick of the clutch hatched two days after the first, and can be seen being fed alongside its sibling. Interestingly, the mother ate the eggshell of the newly hatched chick.