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WHERE DO ALL THE **BLACK HARRIERS** GO?

Among South Africa's rarest breeding endemics, the Black Harrier *Circus maurus* (emblem of the Fitz-Patrick Institute) has a global population of only about 1500 birds. It breeds only in South Africa, where its breeding grounds are centred on the coastal and montane regions of the Western Cape.

Over the last 9 years, FitzPatrick Institute researchers and students have studied its breeding requirements. After monitoring 150 nesting sites and over 250 breeding attempts we understand these requirements well.

Black Harriers breed most successfully in protected coastal areas where mouse numbers are high. Under such conditions, pairs raise on average two young per breeding attempt. The least successful breeding occurs in mountainous areas, where more than half of all nests fail and the average nest produces only one fledgling.

The reason for its rarity is shrinking habitats. Climate change is also likely to exacerbate the situation – more than 90% of the Cape lowlands have been transformed by agriculture. After breeding, many harriers

move away from the breeding grounds, but we know not where. We also have no information about how many of them die (and why) during the non-breeding season.

A successful pilot tracking study in 2008 has shown some unusual behaviours, such as regular night-time activity and, during the breeding season, foraging much farther from the nest (30-50 km) than previously appreciated.

We now plan to start a larger study to answer critical questions about the birds' lives outside the breeding season. We need to know about the geographical regions and the habitats they occupy at this time: we also hope that we can track down the breeding sites of the Black Harriers that migrate to Namibia, where they forage over vegetated dunes in the pro-Namib.

Satellite tracking can provide answers to these questions that no other methods could answer. For biologists it is a revolutionary technology, but like most new technologies, it does not come cheap. Each transmitter costs about US \$4000, and downloading the data costs another \$1000 per year. We need at least 10 transmitters for this project.

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A Black Harrier being fitted with a satellite transmitter.

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