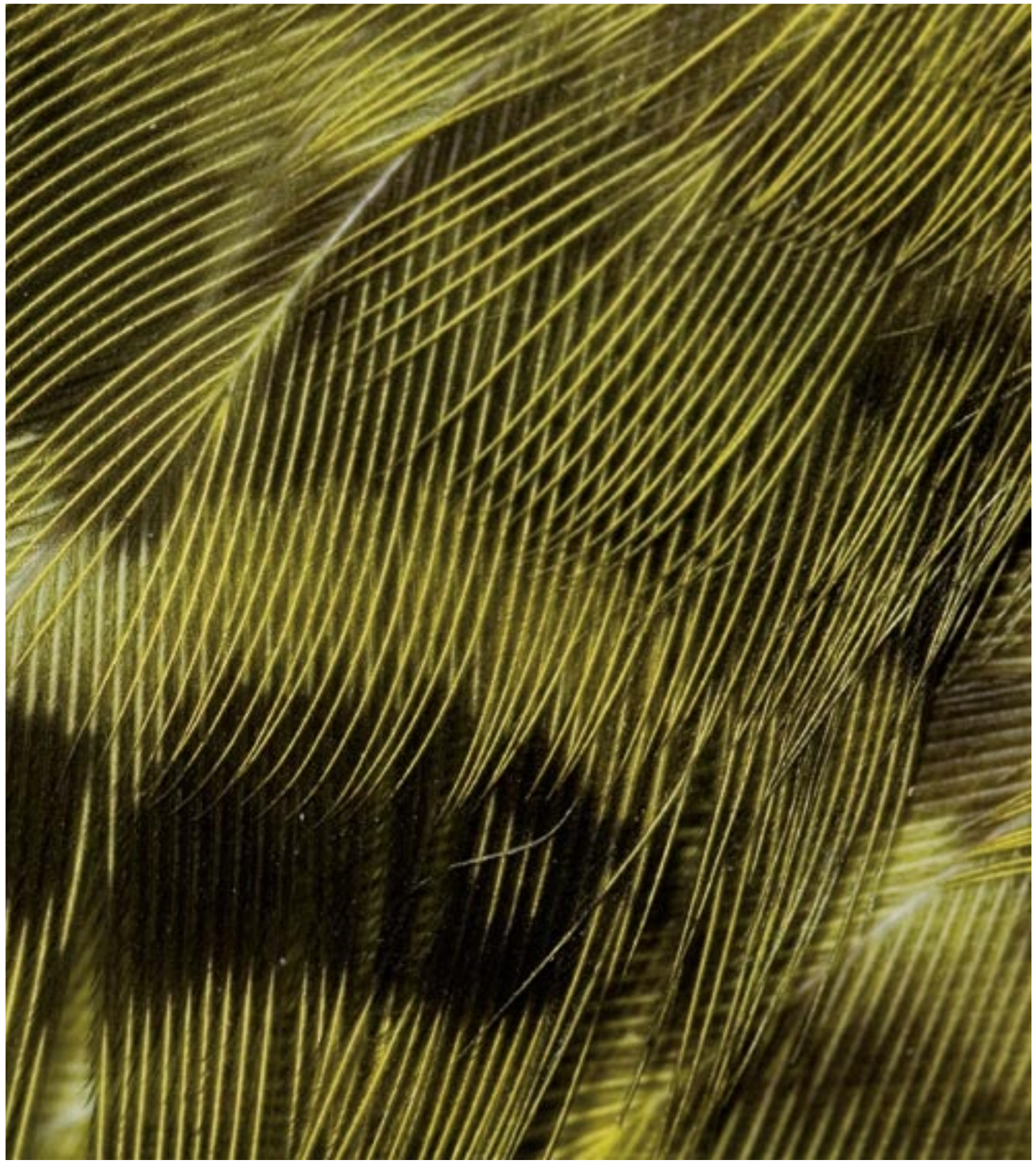

RESCUED FROM THE BRINK OF EXTINCTION

KAKAPO

ALISON BALLANCE

craig potton publishing

This book is dedicated to the many people who have worked so hard over the years to save the kakapo; to Hoki, the first kakapo I had the pleasure of meeting; and to Queenie, a 2009 chick I had the privilege of naming and who is part of the kakapo's bright future.

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Map showing locations for kakapo. GEOGRAPHX

FOREWORD MARK CARWARDINE

It's hard to believe that anyone would fly nearly 20,000 kilometres, halfway around the world, just to see a parrot. But I've done it twice—first, in 1989, with Douglas Adams (author of *The Hitchhiker's Guide to the Galaxy*) and then again, exactly 20 years later, with the comic Stephen Fry.

In both cases, we were on round-the-world tours in search of a motley collection of endangered species for a long-term project called *Last Chance to See*. And the kakapo was the endangered species that had the biggest impact on us all.

The old night parrot of New Zealand is no ordinary parrot. As Douglas pointed out all those years ago, it's the world's largest, fattest and least-able-to-fly parrot. It's part dog, part kitten (or, at least, it's as *affectionate* as a dog and as *playful* as a kitten); it can inflate itself with air to become the size and shape of a football; it has a song like an unreleased collection of Pink Floyd studio outtakes; it smells like a musty clarinet case; and it only comes out at night.

But most of all the kakapo is exceedingly rare. So rare that it's been teetering on the brink, no less, for decades.

On both trips, we were fortunate enough to visit the kakapo capital of the world—Codfish Island, a cartographic speck off the extreme southern end of New Zealand—and to meet real-life kakapo face-to-face.

This is where Douglas and I met a charismatic male, called Ralph, who was one of just 40 kakapo left. It was a time when many people had all but given up hope.

To my complete and utter surprise, Ralph was still living on Codfish when Stephen and I turned up two decades later. I'd often wondered how he had been doing and was delighted to hear that, despite a slightly arthritic leg, he was very much alive and well.

Young kakapo such as these have breathed new life and hope into an aging population once teetering on the edge of extinction. GIDEON CLIMO

The best news of all, though, was that the kakapo population had more than trebled in those intervening years. Today's grand total of 122 is still a far cry from centuries ago, when kakapo were so common all over New Zealand that people used to joke you could shake a tree and three or four of them would fall out. But it's a tribute to one of the most intensive and determined conservation efforts the world has ever seen, the ultimate example of triumph against adversity.

One of those 122 survivors is another male, called Sirocco, a bird I will never forget —and will never be allowed to forget. An incorrigible and amorous 11-year-old, Sirocco had never mated with another kakapo, but had tried many times to mate with people. One day, while we were filming for the *Last Chance to See* BBC-TV series, Sirocco climbed up my leg, using his beak and claws like mountaineers use axes and crampons, made his way up my back, and suddenly was rocking backwards and forwards on my head. Somehow, this up-close-and-personal sequence found its way onto YouTube and has since had millions of hits. Sirocco became the official 'spokesbird' for conservation in New Zealand and I still get people making gyrating movements and shouting 'kakapo!' at me in the street.

But while Sirocco has become an international star of conservation, he isn't the only kakapo known by name. Every single surviving kakapo is known personally by the people trying to protect them. So what we are witnessing is the ultimate in eleventh-hour micro-conservation. The kakapo is so endangered, so close to the edge, that caring for its population as a whole, in the traditional sense, is no longer an option. The only real hope for the last few survivors is round-the-clock individual care and attention.

This is why I welcome this terrific book. It's a fitting tribute to some of the heroes of the conservation world—the determined and dedicated staff and volunteers from the New Zealand Department of Conservation's Kakapo Recovery Team. But, more than that, it's a worthy tribute to one of the most endearing and endangered creatures on the planet.

PREFACE TO MAKE A KAKAPO

I was spending time with my young nephew recently, and among the things he was eager to show me was a very small origami crane that someone else had made. He showed me how to make its wings move then grandly announced we should make our own. He pulled it apart to reveal a well-creased square of paper, and pronounced we could now recreate the crane by following the existing lines and folds. I'm old enough to know that this was highly unlikely to work, but then surprised both my nephew and myself by dredging from somewhere in the recesses of my brain a childhood memory of folding an origami bird. The resulting bird wasn't exactly a svelte crane, but it was undeniably a bird—in fact, its stocky body and limited powers of flight reminded me strongly of a kakapo, a solid earth-bound bird.

As I carefully folded and creased my piece of paper it occurred to me that the process of creating the paper bird was a good analogy for the process of writing about kakapo in this book. I would begin by revealing the finished bird, before taking a blank piece of paper to build the bird fold by fold, fact by fact. I do need to start with the whole bird, because the kakapo is so unusual and different from other birds that it's hard to fully appreciate the component parts without seeing them as a part of the strange whole. And also, we don't actually have a full set of instructions for making a kakapo yet, although we've come a long way since 50 years ago, when it's fair to say nothing was known about this bird, and we couldn't identify a single 'fold', although we made a few guesses.

So let me introduce the kakapo. The kakapo is an ancient, flightless, nocturnal, herbivorous giant parrot with a very low metabolic rate. It is the only member of an endemic subfamily of birds unique to New Zealand, and is the only parrot to have a lek-breeding system, where males perform a competitive display to attract the females, who then raise one to three chicks on their own. Kakapo breed every two to four years

on average, and the infrequent breeding is triggered by the irregular mass fruiting of native plants. Once numerous throughout New Zealand, the kakapo is now extinct in its natural range, and is one of the world's most threatened bird species. It was once reduced to as few as 40 known individuals, however an intensive conservation programme has recently seen the population exceed 100 birds.

Those words are factual, and if you know a lot about birds you might instantly understand their full significance, but to my mind their true magic appears when you understand their context and have some details to hand.

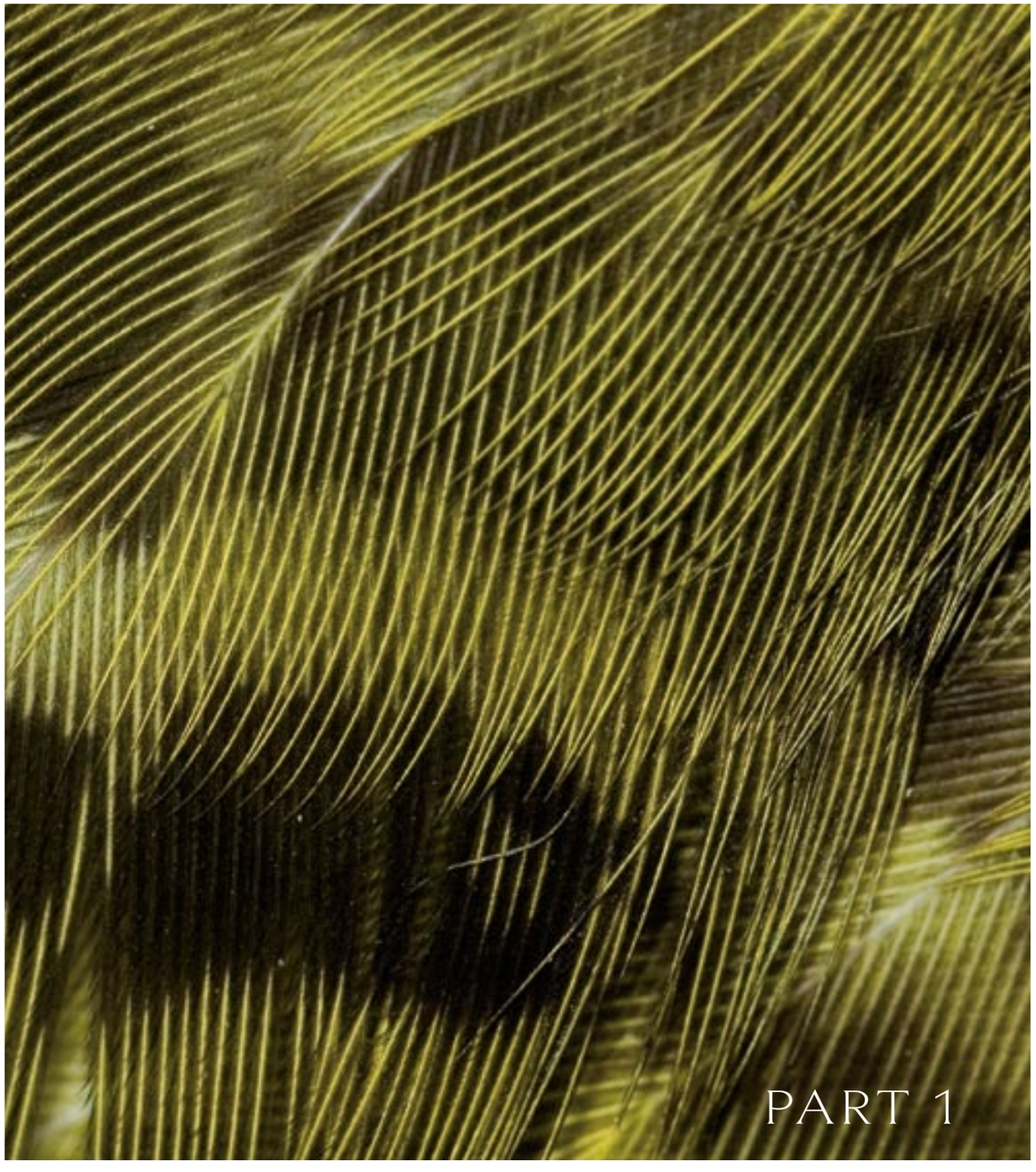
The first purpose of this book, then, is to expand that bare-bones description and to breathe life into a kakapo—to share some of the wonder, poetry and biology of this slightly absurd and totally extraordinary bird—and to show what we know of the unusual origami folds that combine to create an original and unique bird.

The book's second purpose is to chart kakapo conservation over the past 50 years. The Kakapo Recovery Programme is New Zealand's flagship threatened species conservation programme, and it has used a unique blend of science and management, supported by commercial sponsorship. Scientists have been an integral part of the management team, even leading it at times, but the programme has also called on a wide range of external specialists to advise and provide practical help on issues such as nutrition and artificial insemination. This intimate involvement of practical science is a hallmark of the kakapo conservation programme, and has significantly contributed to its success. However, it is ultimately the practitioners of the management and science who have been the key to the rescue of a species. So this book is a tribute not only to an extraordinary bird, but to the equally extraordinary women and men who have laboured to help the kakapo. Theirs has been a labour of love as well as duty, inspired by a 'big green budgie', which manages to be both shy and charismatic, rewarding and frustrating, famous yet enigmatic.

If this book is intended as a guide to understanding kakapo, then let us begin with a very brief guide to the book itself. Part one—Kakapo, the bird—is about the biology, natural history and evolutionary history of the kakapo.

Part two—A brief kakapo history—charts the fall and rise of the species over the last hundred years, and especially during the last 50 years.

Part three—To save the kakapo—focuses on the science and management techniques that have revolutionised work with the species and caused the spectacular turn-around in its fortunes over the last 15 years, through a unique look into the memorable breeding season of 2009.



PART 1

KAKAPO, THE BIRD

1 RETURN OF THE KAKAPO

The kakapo was first named by the Maori, who called it 'parrot of the night'. Early European settlers in New Zealand called it the owl parrot, for the way its face—with its circular spray of bristles—resembled that of an owl. In 1845 scientist George Robert Gray named it *Strigops habroptilus*, meaning owl-face soft-feathered.

Over the last 50 years, the kakapo species has declined almost to extinction, been rescued, and is now making an increasingly confident recovery, which would never have happened had it been left alone to make its own way in the world. The Kakapo Recovery Programme now takes into consideration and works on a number of levels of management: from the microscopic and molecular, to the needs of an individual bird, to those of the entire kakapo population, and beyond that, at an ecosystem level. Because ultimately it isn't enough just to save a species—it needs to be saved in the context of the natural ecosystem in which it lives.

In 1989 the New Zealand Department of Conservation published its first species recovery plan—for the kakapo. The first paragraph was simple and to the point: 'The kakapo, a large flightless nocturnal parrot is one of the rarest and most endangered species in the world.' The extent of its predicament was summed up on the plan's second page: 'In total the species numbers 40 known birds, only 27 per cent of which are females . . . Other than two young banded in 1981, the age of these kakapo are unknown.'

What a difference 20 years makes. The Kakapo Recovery Programme annual report for the year 1 July 2008–30 June 2009 begins: 'The 2009 kakapo breeding season was the most productive since intensive management of the species began in the 1980s; 33 chicks fledged from 27 nests increasing the population from 91 to 124 birds. This is the first time there have been over one hundred kakapo since the early 80s.' It goes

A four-month-old kakapo chick sports its first complete set of feathers but still bears the last traces of baby down. DARREN SCOTT

Flightless kakapo have sturdy legs and strong feet for walking and climbing, and an endearing habit of 'freezing' when they feel threatened. MALCOLM RUTHERFORD

on to say: 'The population of 124 birds is comprised of 67 males and 57 females, 81 adults and 43 juveniles . . . The 33 chicks fledged this season have dramatically altered the age structure of the population; there are now almost twice as many known-age kakapo hatched on offshore island sanctuaries as there are founders from Stewart Island or Fiordland.'

Kakapo numbers never remain static for long—they fluctuate, of course. At the time of writing the total kakapo population is 122, following the deaths of an elderly male and female. And who knows what the numbers will be after the next breeding season?

But numbers are only part of the story. Also in 1989 the late Gerald Durrell wrote an introduction to David Butler's book *Quest for the Kakapo: The full story of New Zealand's most remarkable bird*. In it Durrell said: 'If naturalists go to heaven (about which there is considerable ecclesiastical doubt) I hope that I will be furnished with a troop of kakapo to amuse me in the evening instead of television. Meanwhile, however, the kakapo is in grave danger of slipping away from us, of becoming extinct before we have unravelled the secrets of its strange nocturnal life.'

Well, the good news is that not only is the kakapo no longer in imminent danger of slipping away, but there has been much unravelling of its make up and habits in the last two decades. Although there are still many unsolved mysteries—including seemingly basic ones such as 'exactly how long do kakapo live for?'—we now have considerable insight into many aspects of kakapo biology and life history.

So what kind of bird are they? Douglas Adams, writing in the book *Last Chance to See* said: 'In fact the kakapo is a bird that reminds me of the British motorbike industry. It had things its own way for so long that it simply became eccentric. . . . It pursues its own eccentricities rather industriously and modestly. If you ask anyone who has worked with kakapos to describe them, they tend to use words like "innocent" and "solemn", even when it's leaping helplessly out of a tree.'

The words 'charming', 'endearing' and 'old-fashioned' are also often used to describe the kakapo, and therein lies its conundrum—it evolved in a different world, one in which it could take its time.

So first of all, let's meet a sweet old-fashioned bird, with a suitably old-fashioned name—Nora. Nora's story gives us an insight into the world and biology of a female kakapo. Then we will hear the story of Felix, and discover what it takes to be a male kakapo. Finally we will meet the third member of the kakapo breeding triumvirate—the rimu tree, whose fruit is an indispensable kakapo love potion.