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BREEDING ECOLOGY OF A TRANSLOCATED POPULATION OF RED-  
CROWNED KAKARIKI (*CYANORAMPHUS NOVAEZELANDIAE*) ON TIRITIRI  
MATANGI ISLAND, NEW ZEALAND

A thesis submitted in partial fulfillment of the requirements for the degree of  
Master of Sciences in Ecology at Massey University, Albany  
New Zealand

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(2006)

*For my two families in México, again*





Photo: Suzi Phillips

Red-crowned kākāriki (*Cyanoramphus novaeseelandiae*)



*Photo: Tiritiri Matangi Archives*

Tiritiri Matangi Island



## ABSTRACT

The reproductive ecology of a translocated population of red-crowned kakariki (*Cyanoramphus novaeseelandiae*) was monitored during 2004-2006, covering two breeding seasons on Tiritiri Matangi Island. Red-crowned kakariki nested in tree cavities, ground burrows and in vegetation clusters located in forest remnants, grasslands and replanted vegetation as well as in nestboxes. There was a marked difference in reproductive success between the two breeding seasons. In 2004-2005 1.4 fledglings per breeding pair were produced. In contrast, 3.4 fledglings per breeding pair were produced in 2005-2006. This increase was the result of changes in loss rate during the nesting cycle. Nest failure occurred in 57% of nests in 2004-2005 whereas only 8% of nests were affected in 2005-2006. In both breeding seasons, incubation was the main stage of losses. Clutches hatched with various degrees of asynchrony. Brood sizes ranged from one to nine nestlings. Within broods, nestlings of different hatching ranks reached similar mass at fledgling. Likewise, nestlings of different hatching ranks gained similar weight over the linear portion of the growth curve and grew wings at a similar rate. However, last hatched nestlings fledged with shorter wings. Furthermore, mortality was higher for last hatched nestlings. Sex ratios at the clutch level and at fledgling did not deviate from parity. However, at the clutch level there was a higher proportion of males in clutches laid early and middle in the breeding season. Various lines of evidence suggest that food availability has a direct effect on reproductive success of red-crowned kakariki and can exacerbate the costs of asynchronous hatching. Therefore it is a priority to investigate natural changes in food resources of the red-crowned kakariki and to assess the potential of direct management to improve the conservation of the species.

## AKNOWLEDGEMENTS

This project would have been impossible without the incessant support and enthusiasm of many people and the financial assistance and trust of different institutions. To all of them I want to express my gratitude.

The Consejo Nacional de Ciencia y Tecnología (CONACYT) of Mexico made possible my studies in New Zealand through a scholarship. I am deeply indebted to this institution. The funds of this agency come from taxes paid by Mexican citizens, many of whom do not even have access to elementary education. This fact made me feel privileged and gave me inspiration and strength during difficult periods of my graduate degree.

Initial funds for my research project were provided by The University of Auckland. In addition, continuous financial support came from The Ecology and Conservation Group, Institute of Natural Resources, Massey University. The same institution also provided financial aid to present the results of my project in conferences in New Zealand, Mexico and Brazil. Additional funding came from Supporters of Tiritiri Matangi Inc. and greatly facilitated the course of my research on Tiritiri Matangi Island. Fullers Ferries and Kawau Kat Cruises provided discount tickets for the numerous trips to my study site. To all these institutions I am most grateful.

The Parrot Society (UK) and Stiftung Avifauna Protecta (Germany) kindly provided generous financial contributions that made a significant difference for my project. Similarly Sigma Xi, The Scientific Research Society and Idea Wild (USA) also granted funds and equipment for my research and I am sincerely thankful for their faith in this study.

The New Zealand Department of Conservation granted permits to conduct research on the red-crowned kakariki. In particular I am grateful to Rosalie Stamp and Richard Griffiths who were very helpful and supportive through the application and evaluation processes. This project was approved by The Animal Ethics committees of The University of Auckland and Massey University. I am also grateful to these institutions. Molecular sexing of DNA samples were completed at the Molecular Ecology laboratory, Massey University. I am deeply thankful to Prof. David Lambert and Dr. Leon Huynen by their patience and support with this aspect of my research.

In New Zealand I was fortunate to know many individuals who have been very significant during my academic formation and personal development. More importantly they have become part of my affections. In particular I am grateful to Dianne Brunton and Terry Greene, two excellent scientists who have guided me with the highest professionalism through my master's project. Besides, they have awarded me with their friendship. They have been very important during my time in this land of ground-nesting parrots and I hope this thesis represents a first step towards a scientific collaboration in years to come.

My supervisor Dianne Brunton, trusted me to carry out research on the red-crowned kakariki. The original idea of this project came from her but she gave me absolute freedom and independence to change the emphasis on various aspects in order to satisfy my own questions. Since I started my degree I have received continuous guidance, constructive criticism and encouragement from her. She also gave me a place in The Ecology and Conservation Lab since the very beginning, which has been a most



rewarding experience. Dianne, your restless, sparkling curiosity and good humor makes scientific investigation a very enjoyable practice. Many, many thanks Dianne.

I have also received valuable suggestions and orientation from Terry Greene throughout my research. I am profoundly thankful for his enthusiasm, patience and encouragement. He has been always open to share his experience in parrot research. His professionalism and ability to carefully illustrate the numerous factors involved in the ecology of New Zealand parrots helped me define new directions of my research. In particular, thanks Terry for convincing me that New Zealand parrots can actually be mist-netted; a rather bizarre idea for me when I first arrived in this country.

An important component of my ideas originated from dialogues with a large number of friends and lecturers from The University of Auckland, Massey University, Universidad de Guadalajara and Supporters of Tiritiri Matangi. Also, I was assisted in the field with a large number of enthusiastic helpers who greatly improved the quality of the data collected during my project. These included occasional visitors to the island, members of The Supporters of Tiritiri Matangi, students on the island, volunteers and other friends. I also received emotional support and encouragement from friends and family in Mexico through long telephone conversations and e-mails. Additionally, many friends kindly shared their photographs for the final presentation of this manuscript. Many others made valuable suggestions to earlier versions of this document which greatly impacted the final quality of this document. The list of names of people I want to express my gratitude is very, very large and includes friends from around the world. Now I face the problem of joining geographies and extending my appreciation to all of them in a limited space.

In New Zealand I discovered that it was difficult to communicate the significance of a word in another language if there was not an experience attached to it. I could say the words, but there was always something missing; a feeling of incompleteness followed my sentences. I had to experience words to fully express their meaning. So, this resolves the question as I believe now I can say at least one word in different languages and express my appreciation to everybody without necessarily naming them individually. I have the satisfaction to thank this exceptional people in their own languages:

THANK YOU

GRACIAS

OBRIGADO

TERIMA KASIH

DANC JE

DANKE

KÖSZÖNÖM

DANKIE

TAKK

KA PAI

TLAZOHCAMATI

DZIEKUJĘ

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谢谢你

## TABLE OF CONTENTS

Abstract	v
Acknowledgements	vi
Table of contents	x
List of figures	xv
List of tables	xvii
<b>CHAPTER 1: General Introduction</b>	<b>1</b>
1.1 Diversity of parrots in New Zealand	1
1.2 Conservation of parrots in New Zealand	3
1.3 Conservation of <i>Cyanoramphus</i>	6
1.4 State of knowledge of the red-crowned kakariki ( <i>Cyanoramphus novaezelandiae</i> )	8
1.5 The relevance of breeding studies from a theoretical and management perspective	10
1.6 The current study: Breeding ecology of a translocated population of red- crowned kakariki ( <i>Cyanoramphus novaezelandiae</i> ) on Tiritiri Matangi Island, New Zealand	11
1.7 Outline of the present study	13
1.8 Literature Cited	21

<b>CHAPTER 2: Natural Nesting Sites, Reproductive Parameters and Nesting Success of a Translocated Population</b>	<b>29</b>
2.1 Abstract	29
2.2 Introduction	30
2.3 Objectives	33
2.4 Methods	34
2.4.1 Study site and study species	34
2.4.2 Nesting sites, nesting habitat and nest monitoring	34
2.4.3 Nesting success	39
2.4.5 General statistical analyses	40
2.5 Results	41
2.5.1 Natural nesting sites, nesting habitat and nest site re-use	41
2.5.2 Egg laying period, reproductive parameters and conflict behaviours	42
2.5.3 Nesting success	46
2.6 Discussion	47
2.6.1 Natural nesting sites	47
2.6.2 Laying date, clutch size and nest success	51
2.6.3 Nesting success	52
2.7 Literature cited	55
 <b>CHAPTER 3: Changes in productivity and expected reproductive success between breeding season</b>	 <b>66</b>



3.1	Abstract	66
3.2	Introduction	67
3.3	Objectives	69
3.4	Methods	70
3.4.1	Definition of terms	70
3.4.2	Variation in productivity between breeding seasons	71
3.4.2.1	Egg volume	71
3.4.2.2	Fertility and hatchability	72
3.4.3	Multivariate analysis	72
3.4.4	Variation in measures of reproductive investment and reproductive success	73
3.4.5	Expected reproductive success and stage-specific losses	74
3.4.6	Causes of nest loss	75
3.5	Results	75
3.5.1	Seasonal variation in productivity	75
3.5.2	Variation in measures of reproductive investment and reproductive success	76
3.5.3	Expected reproductive success and stage specific losses	77
3.5.4	Causes of partial and total nest losses	83
3.6	Discussion	85

3.6.1	Seasonal variation in productivity, investment and reproductive success	85
3.6.2	Expected reproductive success and losses	88
3.7	Literature cited	92
<b>CHAPTER 4: Hatching asynchrony, nestling growth and sex ratios</b>		<b>100</b>
4.1	Abstract	100
4.2	Introduction	101
4.3	Objectives	105
4.4	Methods	106
4.4.1	Clutch and brood monitoring	106
4.4.2	Hatching sequences	106
4.4.3	Sex determination of nestlings and sex ratios	108
4.4.4	Nestling growth	109
4.4.5	Mortality	110
4.4.6	Analyses	111
4.5	Results	114
4.5.1	Patterns of hatching	114
4.5.2	Primary sex ratios, sex ratio at fledging and effects of laying date and laying order	114
4.5.3	Nestling growth curves	116
4.5.4	Effects on nestling growth	118

4.5.5	Nestling mortality and reproductive success	124
4.6	Discussion	127
4.6.1	Hatching asynchrony and nestling growth	127
4.6.2	Significance of brood reduction in red-crowned kakariki	130
4.6.3	Sex ratios	131
<b>CHAPTER 5: The breeding ecology of red-crowned kakariki in the context of parrot studies, management relevance and future directions for research</b>		141
5.1	Abstract	141
5.2	Breeding biology among Psittaciformes	142
5.3	Uniqueness of life-history traits of <i>Cyanoramphus</i> parakeets	144
5.5	Seasonal variation in productivity	146
5.6	Parent-offspring interactions	149
5.7	Banded individuals	151
5.8	Potential for translocations	151
5.9	Literature cited	154
<b>Appendix 1</b>		162
<b>Appendix 2</b>		165
<b>Appendix 3</b>		168
<b>Appendix 4</b>		170
<b>Appendix 5</b>		171