

'Information on the activities of tagged and non-tagged kererü at Church Bay'

Introduction

Leon Fife is a senior high school teacher at Avonside Girls High School. In 2003 Leon was awarded a fellowship from the Royal Society of New Zealand to work for Kaupapa Kererü throughout 2004. Leon is assisting our Lincoln University students in the field as well as undertaking his own research project gathering detailed information on the activities of tagged and non-tagged kererü at Church Bay.

Aim

The purpose of this research project is to gather detailed information on the activities of tagged and non-tagged kererü at Church Bay, within Whakaraupö / Lyttelton Harbour.

Objectives

- To estimate the percentage of time kererü spend on activities (such as roosting, preening, feeding)
- To estimate the effect of time of day, weather conditions, human activity, presence of other kererü (and any other factors) has on the amount of time spent and frequency of these activities
- To determine whether there are any significant differences between individual birds regarding amount of time spent indulging in the activities

Methodology

In January 2004 Maaikē and Department of Conservation staff captured and radio-tagged 5 kererü from Church Bay. Every second week each tagged bird is observed for 30 minutes and the activity of each kererü is recorded for each minute. Data recorded each minute is:

- The presence and behaviour of other birds close by

- Food source and which part is being consumed
- Time of day and weather conditions
- Activity of kererü

Study Area: Church Bay

After an initial trial it was decided that Leon would monitor kererü at Church Bay instead of Orton Bradley Park. It became extremely difficult to undertake 30-minute observations at Orton Bradley Park due to the difficult nature of the vegetation and the terrain.

Preliminary Results

Table 1: Percentage totals of time spent carrying out each activity during 30 minute observation periods in June and July

Bird number and number of observations made during June and July			Percentage of time spent by kererū carrying out each activity during 30 minute observation periods in June and July									
Tagged Bird Number	Number of observations		Roosting		Preening		Feeding		Flying		Other	
	June	July	June	July	June	July	June	July	June	July	June	July
10	17	11	57.8	68.8	6.3	13.6	31.8	14.2	4.1	3.3	0	0
18	8	5	62.5	53.3	21.7	20.0	14.6	21.3	1.3	5.3	0	0
34	13	8	61.3	53.3	15.4	31.3	20.5	8.8	2.8	1.3	0	5.4
36	12	9	61.4	67.5	22.5	19.6	13.3	11.4	2.8	1.2	0	0
38	11	5	65.8	67.3	27.9	8.7	5.2	21.3	1.2	2.7	0	0
Untagged kererū	5	12	54	49.7	18.7	11.7	24.7	32.2	2.7	2.2	0	4.2
MEAN TOTAL for all birds			60.8	59.7	17.4	17.2	19.1	18.7	2.7	2.5	0	1.9

NOTE:

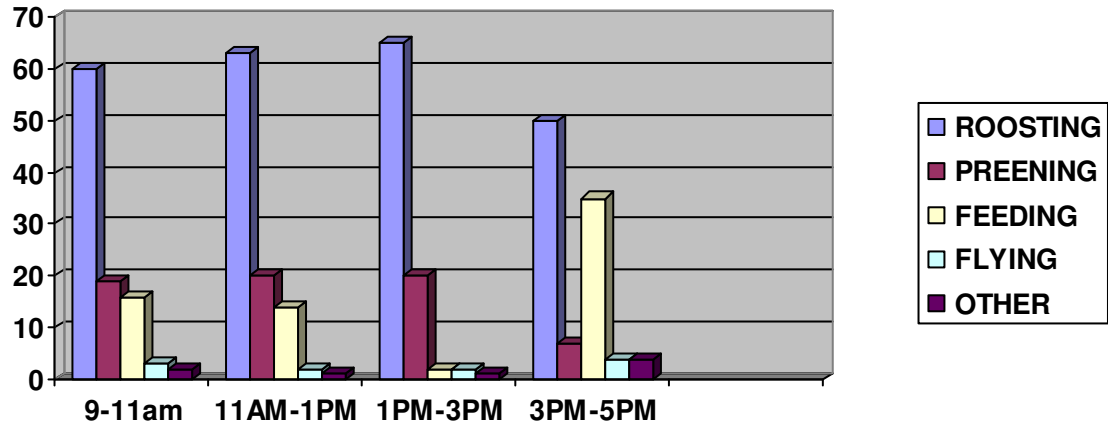
- “Other” refers to activities such as those associated with mating (e.g. display dives) or the bird has flown off and contact has been lost.
- Other studies have found that the birds spend about 25% of their time feeding. My preliminary results suggest slightly less in Church Bay (19.1% and 18.7%)
- Uninterrupted feeding times have averaged around 15–20 minutes with the longest period of feeding observed being 63 minutes.
- Well over 95% of their diet has consisted of Tree Lucerne (leaves and flowers)

Table 2: Percentage of time spent carrying out each activity at different times of the day
(May to August).

Time of day	Total number of observations made		Percentage of time spent carrying out each activity at different times of the day (May to August)									
			Roosting		Preening		Feeding		Flying		Other	
	June	<i>July</i>	June	<i>July</i>	June	<i>July</i>	June	<i>July</i>	June	<i>July</i>	June	<i>July</i>
9-11 am	19	<i>15</i>	62.6	<i>58.6</i>	17.4	<i>21.1</i>	17.0	<i>14.5</i>	3.0	<i>3.2</i>	0	<i>2.3</i>
11am - 1pm	17	<i>9</i>	55.1	<i>70.5</i>	27.3	<i>16.0</i>	15.7	<i>11.4</i>	2.0	<i>1.4</i>	0	<i>0.7</i>
1pm-3pm	17	<i>14</i>	70.2	<i>62.2</i>	15.5	<i>24.1</i>	12.4	<i>11.9</i>	2.0	<i>1.9</i>	0	<i>0</i>
3pm-5pm	13	<i>12</i>	53.1	<i>46.7</i>	7.2	<i>8.6</i>	35.6	<i>37.2</i>	4.1	<i>3.3</i>	0	<i>4.2</i>

NOTE: Other studies have also found that the birds tend to feed more often later in the day.

Graph 2: Percentage of time spent carrying out each activity at different times of the day (May to August).



NOTE:

- The above results were based on 210 separate observations spread evenly over the 4 months
- The “preening” results are not totally reliable as it was sometimes difficult to see a bird clearly due to it being partly obscured or a long distance away.
- “other” includes times when birds shifted out of view.
- The results do not include mating, nesting activity etc which are just starting to become prevalent now
- Uninterrupted feeding times have averaged around 15–20 minutes
- Over 90% of their diet has consisted of Tree Lucerne (leaves and flowers)