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# **A Study of Tuberculosis in Hedgehogs so as to Predict the Location of Tuberculous Possums.**

**A thesis presented in partial fulfilment of the requirements for the degree  
of Masters of Veterinary Studies at Massey University,  
Palmerston North, New Zealand.**



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## Abstract

Hedgehogs are spillover hosts for *Mycobacterium bovis*, which means the prevalence of disease in the hedgehog is directly related to the prevalence of disease in a local reservoir population such as the possum.

Possoms have home ranges similar to that of hedgehogs and on large farms, locating a tuberculous hedgehog could substantially reduce the area where extensive control is required to eliminate tuberculosis from the wild animal population. Male animals usually have a larger home range than females and this is true of the hedgehog. In utilising the knowledge of a hedgehog's home range, female hedgehogs could provide a specific local indicator of the presence of tuberculous possums and male hedgehogs could locate the general region on the farm with tuberculous possums.

The hedgehog could also be considered a temporal indicator of tuberculosis in the wild animal population especially where there has been a history of tuberculosis. The longevity of the hedgehog is reasonably short (2-3 years in the wild) and should sufficient control of other tuberculous animals occur then the disease will also disappear from the hedgehog population.

Hedgehogs from this study were noted to be carriers of *Salmonella enteritidis*, *Sarcoptes scabiei*. This is believed to be the first report of these pathogens associated with hedgehogs in New Zealand.

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## Table of Contents

Abstract	i
Acknowledgments	ii
Tables of Contents	iv
List of Tables	vii
List of Figures	viii
<b>Chapter 1 Introduction</b>	<b>1</b>
<b>Chapter 2 A Review of the Literature</b>	<b>4</b>
Introduction of the hedgehog into New Zealand	5
Nocturnal Activities and Territoriality	5
Population density	7
Home Range and Influencing Factors	7
Diseases of hedgehogs	11
Zoonotic Diseases	13
Tuberculosis in New Zealand	14
Control of tuberculosis in New Zealand	16
Wildlife ecology	16
Study design	17
Methodology of a field study	21
Trapping	21
Choice of Traps	22
Number of Traps	22
Radio Tracking	23
Justification of Home Range Analysis Techniques	24
References	26
<b>Chapter 3 A Longitudinal Study of Tuberculosis in Hedgehogs</b>	<b>30</b>
Introduction	31
Materials and Methods	31
Study Site and Study Design	31
Trapping	32
General Procedure for Animal Examination	33
Radio Tracking	34
The Cull	35
Analysis	36
Results	37
Trapping Success	37
Population Density	40
Dispersal	40
Demographics	42
Mortality	45

Population Cull	46
Disease Status	46
Home Range Analysis	47
Home Range Size	55
Discussion	64
References	71
<b>Chapter 4 A Prevalence Study of Tuberculosis in New Zealand Hedgehogs.</b>	<b>73</b>
Introduction	74
Materials and Methods	74
Results	75
Habitat Description	77
Tuberculosis History	80
Tuberculosis Prevalence in Hedgehogs	81
Ability to Detect Disease	82
Discussion	83
References	85
<b>Chapter 5 A Study of two other disease severely affecting hedgehogs</b>	<b>86</b>
Main Introduction	87
<b>Chapter 5.1</b> Carriage of Salmonellae and Yersinia by New Zealand	
Hedgehogs	88
Introduction	88
Materials and Methods	88
Results	89
Discussion	90
References	91
<b>Chapter 5.2</b> <i>Sarcoptes scabiei</i> infestation on New Zealand	
Hedgehogs	92
Introduction	92
Materials and Methods	92
Results	93
Discussion	95
References	98
<b>Chapter 6 General Discussion</b>	<b>99</b>
Demographics	100
Habitat Preference and Home Range	100
Diseases	101
A Sentinel Animal for tuberculous possums	101
References	103



<b>Appendices</b>	<b>105</b>
<b>Appendix 1</b> An Aerial Photograph of the Study Site Described in Chapter Three	106
<b>Appendix 2.1</b> Structure of the Form used to Record Biological Field Data	107
<b>Appendix 2.2</b> Structure of the Form used to Record Radio Tracking Fixes	108
<b>Appendix 2.3</b> Form used to Monitor the Tagged Hedgehog Population	109
<b>Appendix 2.4</b> Structure of the Form Used for Recording Necropsy Data collected in Chapters Three and Four	110
<b>Appendix 3</b> Photographs showing various aspects of the hedgehog field studies	111

## List of Tables

Table 2-1	Diet composition of <i>Erinaceus europaeus</i>	11
Table 2-2	External parasites of the European hedgehog ( <i>Erinaceus europaeus</i> )	12
Table 2-3	Internal Parasites of the European Hedgehog ( <i>Erinaceus europaeus</i> )	12
Table 3-1	Trap catch success and odds ratio of capture success stratified by habitat type (95% confidence limit)	38
Table 3-2	Descriptive capture statistics of the observed hedgehog population	39
Table 3-3	Random selection of hedgehog captures and subsequent recaptures throughout the study period	41
Table 3-4	The fate of each of the radio collared hedgehogs	48
Table 3-5	A summary of home range estimates in the tracked hedgehogs.	55
Table 3-6	Average home range stratified by sex	55
Table 4-1	Number of hedgehogs captured on each site	76
Table 4-2	Percentage of land included in the trapping grid on each Wairarapa farm	76
Table 4-3	Distance between capture sites of the tuberculous animals	81
Table 4-4	Probability of failing to detect disease in the population	82
Table 5.1-1	Recovery of <i>S. enteritidis</i> by location.	90
Table 5.2-1	Mite species identified in hedgehogs with mange stratified by capture location and sex	94

## List of Figures

Figure 2-1	Comparison of home range estimates of hedgehogs from various studies	9
Figure 2-2	Seasonal fluctuations of weight in the European hedgehog	10
Figure 2-3	Time line showing the events leading up to current control measures for tuberculosis in New Zealand	19
Figure 3-1	Trap catch frequency for two selected areas: Pampas Alley and Club Med	38
Figure 3-2	Percentage of males in total recaptures for each month during the longitudinal study	39
Figure 3-3	Survival curve for time to disappearance stratified by age group	42
Figure 3-4	Percentage of adults in total new captures in each month of the study	43
Figure 3-5	Percentage of males in total captured adult hedgehogs for each month of the study	43
Figure 3-6	Seasonal fluctuations of the average body weight in hedgehogs between October95 and May96 for the study population	44
Figure 3-7	Box-and-Whisker plots for body weight by condition scores and age class in hedgehogs	45
Figure 3-8	Recorded locations for hedgehog A013 during the period between 8/11/95 and 8/5/96	48
Figure 3-9	Recorded locations for hedgehog A014 during the period between 8/11/95 and 18/10/96	50
Figure 3-10	Recorded locations for hedgehog A015 during the period between 8/11/95 and 17/1/96	51
Figure 3-11	Recorded locations for hedgehog A016 during the period between 8/11/95 and 1/5/96	52
Figure 3-12	Recorded locations for hedgehog A017 during the period between 9/11/95 and 20/1/96	53
Figure 3-13	Recorded locations for hedgehog A038 during the period between 17/12/95 and 7/5/96	54
Figure 3-14	Home range estimates for hedgehog A013 based on all recorded locations	56
Figure 3-15	Home range estimates for hedgehog A014 based on all recorded locations	57
Figure 3-16	Home range estimates for hedgehog A015 based on all recorded locations	58

Figure 3-17	Home range estimates for hedgehog A016 based on all recorded locations	59
Figure 3-18	Home range estimates for hedgehog A017 based on all recorded locations	60
Figure 3-19	Home range estimates for hedgehog A038 based on all recorded locations	61
Figure 3-20	Overlapping home ranges of A013, A017 and A038 based on 95% minimum convex polygon estimates	62
Figure 3-21	Overlapping home ranges of A014, A015 and A016 based on 95% minimum convex polygon estimates	63
Figure 4-1	Comparison between farm size and the numbers of hedgehogs captured	76
Figure 4-2	Comparison between the proportion of the farm covered by the trapping grid and the total numbers of hedgehogs captured	77
Figure 4-3	Different types of landscape and habitat on three of the Wairarapa farms	79
Figure 4-4	Positions where each tuberculous animal was captured around the middle block on the HFB site	82
Figure 5.2-1	Temporal occurrence of mange on Hedgehogs	95
Figure 5.2-2	Mange caused by <i>Sarcoptes scabiei</i>	96
Figure 5.2-3	<i>Sarcoptes scabiei</i> mite	96