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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.

Robyn Jane GORTON
1998
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.

Possums 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 enteriditis, Sarcoptes scabiei*. This is believed to be the first report of these pathogens associated with hedgehogs in New Zealand.
I began this Masters in Veterinary Studies in 1995. Back then I was the only science graduate in a class of veterinarians. I would like to express my heartfelt thanks to my supervisors: Professor Roger Morris, for believing in me and encouraging me to take on the challenge. He has also been a prominent behind the scene player in establishing the project and also the degree. His hard work has not gone unnoticed.

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