

Lyme Disease and Deer:
A Public Perception Study
on
Block Island, Rhode Island

by
Virginia Maloney Lawrence
B.A., Wellesley College, 1964

Thesis

Submitted in partial fulfillment of the requirements for the
Degree of Master of Arts in the
Center for Environmental Studies at Brown University

April 1994

Abstract

Since the discovery of Lyme disease in 1975, research on the etiology of the disease has established a link between white-tailed deer and the tick responsible for transmitting the disease. In roughly the same period of time, deer have emerged as "nuisance" animals in much of the northeastern United States. Where Lyme disease is endemic the question arises as to whether the risk of Lyme disease should be controlled by means of elimination or reduction of resident deer herds. Examples exist where deer elimination and reduction have been shown to be effective at lowering the risk of Lyme disease, however these experiments have been done on private property or on conservation land owned by a private land trust organization.

By conducting a public perception study of a Lyme-deer affected population, I hoped to learn whether there is support for a deer elimination or reduction program since public support would be needed to implement aggressive deer control measures. In addition, since Lyme disease is acquired in the course of outdoor activities, I wanted to know what effects Lyme disease is having on attitudes toward the outdoors and outdoor activities. Finally, I wanted to know where Lyme disease fits on an overall list of factors influencing people's sentiments toward deer.

I conducted a survey on Block Island, Rhode Island of a population coping with Lyme disease and deer problems. In a survey, mailed in the winter of 1992, I asked how people assessed their level of concern about Lyme disease, if they linked the disease with deer, if their attitudes were changing toward deer and if so what factors most influenced the change. I also asked about their levels of participation in outdoor activities and their general attitude toward the outdoors.

I found that there was an overwhelming sense of concern about the disease, equally among men and women, those who had been Lyme-affected and those who had not, those with children and those without. Where attitudes toward deer were changing, it was strongly toward the negative. And although the risk of accidents and the destructiveness of deer were major factors, Lyme disease was identified as by far the largest influencer of attitudes toward deer. Yet when asked how they felt about proposals to eliminate or reduce deer, people ranked methods after human health and public safety as a major factor influencing their attitude.. Furthermore, the strong concern about the risk of Lyme disease had not led to significant changes in feelings about the outdoors or lower levels of participation in outdoor activities.

The survey findings point out the gap between perceptions and actions, especially when it comes to self-protective behavior. The results do indicate that the perceptions about deer are undergoing significant changes which may result in action in the future. The development of an effective Lyme disease vaccine, in human trials for the first time in 1994, may reduce the importance of Lyme disease as a factor in attitudes toward deer.

A need for continuing education is indicated by the results. The survey respondents were well-informed about the disease and preventive measures, but were not acting on that knowledge as much as their self reports of concern would suggest. There is also a need to bring the public and responsible officials and land managers together to develop workable, publicly supported programs to address deer management needs of today and the future.