



BIOLOGY AND CONSERVATION OF  
**MARTENS, SABLES,  
AND FISHERS**

A New Synthesis

EDITED BY

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# 7

## Pathogens and Parasites of *Martes* Species

### Management and Conservation Implications

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#### ABSTRACT

The impacts of pathogens and parasites and their associated diseases are integral to understanding potential threats to *Martes* populations. In this chapter, we summarize the known relations of pathogens and parasites to their *Martes* hosts and review the epidemiology and life cycles of 4 selected pathogens that may be particularly important to *Martes* species, including rabies viruses, canine distemper virus, parvoviruses, and *Toxoplasma gondii*. We also address management options for dealing with disease issues and their implications for conservation efforts for *Martes* species. These implications include disease risk in reintroduction programs, handling of potentially diseased individuals, and protocols for disease assessment and prevention. Finally, we suggest future directions and roles of wildlife disease ecology in the research and management of *Martes* species. Our overall goal is to provide information that will be helpful for wildlife biologists, wildlife veterinarians, and others concerned about the biology, management, and conservation of *Martes* species.

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#### Introduction

Despite the extensive and growing body of ecological research conducted on *Martes* species, relatively little is known about their infections by pathogens or infestations by parasites. The threat of disease is integral to conservation programs aimed at protecting members of this genus because of the insular nature of many *Martes* species and concern over the long-term stability of small *Martes* populations (Woodroffe 1999; Broekhuizen 2006; Saeki 2006).

First, we will define some terms frequently used in this chapter but possibly used in a somewhat different sense by other authors. A *pathogen* is any