
AN OVERVIEW OF SOME EMERGENT INFECTIOUS DISEASES OF CONCERN TO MONTANA'S NONGAME SPECIES

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Virulent infectious diseases in a variety of wildlife populations have increased over the past couple of decades in both natural and managed landscapes. Fungal and viral pathogens, aided by human disturbance of habitats and human, wildlife, and domestic animal derived transport, are playing an increasingly dominant role in wildlife disease epidemics. State and federal agencies and professional organizations such as this chapter need to do a better job of keeping wildlife professionals fully informed of all emerging infectious diseases in order to facilitate detection and a potential response at the earliest possible time. I will provide overviews of: 1) White-Nose Syndrome which is caused by a cold-adapted fungus that, since 2006, has killed more than 6 million bats in eastern North America and has continued to spread westward; 2) two chytrid fungi which have caused mass mortalities and extinctions of amphibians worldwide, including near extinction of the Northern Leopard Frog (*Lithobates pipiens*) and decline of the Western Toad (*Anaxyrus boreas*) in western Montana; 3) Tiger Salamander Ranavirus, an iridovirus which is the most likely cause of mass mortality events in larval Western Tiger Salamander (*Ambystoma mavortium*) populations that have been recorded across Montana; and 4) Snake Fungal Disease, which has emerged as a threat to some snake populations in eastern and midwestern North America since 2006 and may be spreading westward. In general, wildlife professionals in Montana should report observations of unhealthy wildlife and wildlife mortality events that may involve these and other emerging infectious diseases to the Montana Fish, Wildlife, and Parks Wildlife Laboratory in Bozeman in order to facilitate coordinated diagnoses and responses with other state and federal agencies.