

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

USGS Staff -- Published Research

US Geological Survey

2002

Wildlife Diseases: Crying Wolf or Crying Shame?

Robert G. McLean
US Geological Survey

Follow this and additional works at: <https://digitalcommons.unl.edu/usgsstaffpub>



Part of the [Earth Sciences Commons](#)

McLean, Robert G., "Wildlife Diseases: Crying Wolf or Crying Shame?" (2002). *USGS Staff -- Published Research*. 142.

<https://digitalcommons.unl.edu/usgsstaffpub/142>

This Article is brought to you for free and open access by the US Geological Survey at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in USGS Staff -- Published Research by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

Special Session One.

Wildlife Diseases: Crying Wolf or Crying Shame?

Chair

Robert G. McLean

US Geological Survey, National Wildlife Health Center
Madison, Wisconsin

Co-chair

John R. Fischer

Southeastern Cooperative Wildlife Disease Study,
University of Georgia
Athens

Opening Remarks

Robert G. McLean

*US Geological Survey, National Wildlife Health Center
Madison, Wisconsin*

Diseases of North American wildlife are causing serious problems for wildlife, and some wildlife diseases pose health threats to humans and domestic animals. Information will be presented at this wildlife disease session to alert resource managers enough to consider disease as an important issue when managing wildlife populations. It will be a crying shame if appropriate actions are not taken to monitor diseases adequately and to prevent or control them to protect our wildlife resources.

Wildlife diseases are having a greater impact on wildlife populations than ever before because of invasive diseases, new and emerging diseases and re-emerging diseases. The quantity and quality of wildlife habitats are shrinking as human development encroaches on natural habitats and creates more habitat fragmentation. Because of this declining availability of quality

habitats, combined with the rapid global movement of people, animals, products and disease pathogens, wildlife diseases have expanded and presented an increasing threat to our native wildlife populations, as well as to human and domestic animal populations that are associated with them.

We can no longer consider diseases of wildlife and the mortality they cause as insignificant, and we need to change the concept that the level of mortality caused by diseases is fully compensatory within wildlife populations. One mortality or one disease can kill a significant portion of already reduced and limited populations; diseases, such as avian botulism, killed thousands of white pelicans (*Pelecanus erythrorhynchos*) and brown pelicans (*P. occidentalis*) at the Salton Sea in southern California a few years ago. One wildlife disease, such as brucellosis in bison (*Bison bison*) of the Greater Yellowstone Area, can cause havoc and conflict between domestic livestock producers, the agencies that support and protect wildlife and the wild animal managers and agencies that also wish to protect the wildlife. A benign disease of birds in the eastern hemisphere, West Nile virus suddenly can invade the western hemisphere, causing extensive mortality in native North American bird species.

To combat these emerging wildlife diseases, we need to develop and expand our capabilities for:

- disease monitoring and surveillance programs to provide timely detection of new and emerging pathogens,
- diagnostic services to provide rapid identification of specific causative agents,
- timely and appropriate responses to contain and control disease outbreaks and to prevent disease emergence, and
- an infrastructure for the tracking, evaluation, and rapid dissemination of disease information during the course of outbreaks or invasive and emergent events.

These capabilities should be expanded before and not during a disease outbreak.

In this session, we selected some of the important wildlife diseases that currently affect a variety of wildlife species to discuss, and we assembled the disease experts to present the latest information on how these diseases impact

native bird and mammal species of North America. Diseases to be presented are invasive diseases—represented by West Nile virus—newly emerging diseases—represented by chronic wasting disease of deer and American elk (*Cervus elaphus*)—and avian vacuolar myelinopathy—a neurological disease of bald eagles (*Haliaeetus leucocephalus*), American coots (*Fulica americana*) and waterfowl. Re-emerging wildlife diseases of birds, such as avian botulism, avian cholera, Newcastle disease and avian mycoplasma will be represented by a presentation on Type C avian botulism. Hemorrhagic diseases in white-tailed deer (*Odocoileus virginianus*) will be highlighted as part of the emerging and reemerging diseases of mammals that also include such diseases as bovine tuberculosis in deer, brucellosis in bison and rabies in raccoons (*Procyon lotor*). Finally, a presentation on sylvatic animal plague in the western states will represent those diseases affecting the recovery of the threatened and at risk wildlife species, black-footed ferrets (*Mustela nigripes*) and black-tailed prairie dogs (*Cynomys ludovicianus*), and other diseases in this category are impacting the recovery of additional at risk species, such as California sea otters (*Enhydra lutris*) and Hawaiian green turtles (*Chelonia mydas*).