

Trends in wildlife intake at a rehabilitation center in Central Alberta: A retrospective analysis of birds, mammals, and herptiles, from 1990 through 2012

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Great horned owl (*Bubo virginianus*).

Introduction

Clinical wildlife medicine, also known as wildlife rehabilitation, is a subfield of wildlife management, an interdisciplinary field melding animal behavior, natural history, and veterinary medicine.^{1,2} Wildlife rehabilitation provides temporary care of diseased, injured, and orphaned animals with their subsequent release into suitable habitats.³ Facilitating population and species preservation, wildlife rehabilitation affords the unique opportunity to access scientific data in patient reports aiding in the study of human encroachment on natural habitat.⁴ A unique form of wildlife management, wildlife rehabilitation acts as an indicator for animal health in urban areas, providing quantitative data essential for the evaluation of human-related effects on wildlife.⁵ Anthropogenic causes of wildlife stress, injury, and mortality are numerous: abandonment of captive individuals, chemical exposure, domestic animal attacks, electrocution, entanglement in fishing line, deliberate and accidental poisoning, poaching, shooting, submersion in oil, trapping, and collisions with buildings, fences, power lines, vehicles, and windows.⁶⁻⁸

Few studies have assessed wildlife rehabilitation on a long-term scale, and those that are available focus on the mortality of select animal groups, such as birds of prey.⁹ Kelley and Sleeman¹⁰ assessed injury and death in red and gray foxes (*Vulpes vulpes* and *Urocyon cinereoargenteus*) from 1993 through 2001; the principle reasons for admission were orphaning (33%) and trauma (27%). Wendell et al.¹¹ identified causes of injury and death of 409 birds of prey representing 23 species. From 1995 through 1998, the main reasons for admission were trauma (66%) and orphaning (15%). More recently, Molina-Lopez et

ABSTRACT: Using patient data from the Wildlife Rehabilitation Society of Edmonton, we assessed reasons for admission, overall success of rehabilitation, and compared temporal trends with human population growth in the region. Over the survey period 13,375 individuals from 271 species were admitted. These included 11,637 birds (87%), 1,727 mammals (13%), and 11 herptiles (<0.1%). Outcome data were not reliably collected from 1990 through 2007 so it is not possible to provide a valid rate of the rehabilitated animal release for those years. However, starting in 2008 outcome data was collected for the majority of animals with the average release rate of 45.7% from 2008 through 2012. There was a strong relationship between Edmonton's population growth and the annual intake of wildlife ($R^2 = 0.84$, $F = 104.6$, $P = 0.001$). This study provides an overview of wildlife intake trends from 1990 through 2012 and is the first known published retrospective of wildlife intake in Alberta.

KEY WORDS: birds, mammals, herptiles, retrospective analysis, species At Risk, wildlife injury, wildlife management, wildlife rehabilitation

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