DESCRIPTION

To understand modern principles of sustainable management and the conservation of wildlife species requires intimate knowledge about demography, animal behavior, and ecosystem dynamics. With emphasis on practical application and quantitative skill development, this book weaves together these disparate elements in a single coherent textbook for senior undergraduate and graduate students. It reviews analytical techniques, explaining the mathematical and statistical principles behind them, and shows how these can be used to formulate realistic objectives within an ecological framework.

This third edition is comprehensive and up-to-date, and includes:

• Brand new chapters that disseminate rapidly developing topics in the field: habitat use and selection; habitat fragmentation, movement, and corridors; population viability analysis, the consequences of climate change; and evolutionary responses to disturbance.

• A thorough updating of all chapters to present important areas of wildlife research and management with recent developments and examples.
A new online study aid – a wide variety of downloadable computer programs in the freeware packages R and Mathcad, available through a companion website. Worked examples enable readers to practice calculations explained in the text and to develop a solid understanding of key statistical procedures and population models commonly used in wildlife ecology and management.

The first half of the book provides a solid background in key ecological concepts. The second half uses these concepts to develop a deeper understanding of the principles underlying wildlife management and conservation. Global examples of real-life management situations provide a broad perspective on the international problems of conservation, and detailed case histories demonstrate concepts and quantitative analyses. This third edition is also valuable to professional wildlife managers, park rangers, biological resource managers, and those working in ecotourism.

![ABOUT THE AUTHOR](image)

**Professor John Fryxell** currently teaches in the Department of Integrative Biology at the University of Guelph, Canada, where he has worked closely with a number of university and government scientists to develop sustainable conservation strategies for elk, woodland caribou, wolves, and marten. Previous to this he worked at the University of British Columbia and as Wildlife Consultant for the Provincial Government of Newfoundland and Labrador. His research has focused on the role of behavior in population and community dynamics of large mammals. He has a continuing interest in African wildlife, including long-term studies on the demography and spatial ecology of large herbivores and their predators in Serengeti National Park.

**Professor Anthony Sinclair** is currently Professor Emeritus at the University of British Columbia, Vancouver, Canada. He has been Director of the Centre for Biodiversity Research at the University, and a Professor at the Department of Zoology. He has researched Canadian subarctic ecosystems and worked on Canadian boreal forest ecosystems, in particular on cycles of snowshoe hares. He worked in the Serengeti National Park, Tanzania, Africa, on ecology and conservation projects for over 40 years. He has conducted ecological research on the Serengeti ecosystem of Tanzania, documenting multiple states in Serengeti savanna and grassland communities. He has also worked on endangered marsupial mammal populations and predation by exotic carnivores in Australia and similar systems in New Zealand.