

# Conservation Of Wildlife Populations Demography Genetics And Management

Introduction to Population Ecology, 2nd Edition is a comprehensive textbook covering all aspects of population ecology. It uses a wide variety of field and laboratory examples, botanical to zoological, from the tropics to the tundra, to illustrate the fundamental laws of population ecology. Controversies in population ecology are brought fully up to date in this edition, with many brand new and revised examples and data. Each chapter provides an overview of how population theory has developed, followed by descriptions of laboratory and field studies that have been inspired by the theory. Topics explored include single-species population growth and self-limitation, life histories, metapopulations and a wide range of interspecific interactions including competition, mutualism, parasite-host, predator-prey and plant-herbivore. An additional final chapter, new for the second edition, considers multi-trophic and other complex interactions among species. Throughout the book, the mathematics involved is explained with a step-by-step approach, and graphs and other visual aids are used to present a clear illustration of how the models work. Such features make this an accessible introduction to population ecology; essential reading for undergraduate and graduate students taking courses in population ecology, applied ecology, conservation ecology, and conservation

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biology, including those with little mathematical experience.

Loss of biodiversity is among the greatest problems facing the world today.

Conservation and the Genetics of Populations gives a comprehensive overview of the essential background, concepts, and tools needed to understand how genetic information can be used to conserve species threatened with extinction, and to manage species of ecological or commercial importance. New molecular techniques, statistical methods, and computer programs, genetic principles, and methods are becoming increasingly useful in the conservation of biological diversity. Using a balance of data and theory, coupled with basic and applied research examples, this book examines genetic and phenotypic variation in natural populations, the principles and mechanisms of evolutionary change, the interpretation of genetic data from natural populations, and how these can be applied to conservation. The book includes examples from plants, animals, and microbes in wild and captive populations. This second edition contains new chapters on Climate Change and Exploited Populations as well as new sections on genomics, genetic monitoring, emerging diseases, metagenomics, and more. One-third of the references in this edition were published after the first edition. Each of the 22 chapters and the statistical appendix have a Guest Box written by an expert in that particular topic (including James Crow, Louis Bernatchez, Loren Rieseberg, Rick Shine, and Lisette Waits). This book is essential for advanced undergraduate and graduate students of conservation genetics, natural resource management,

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and conservation biology, as well as professional conservation biologists working for wildlife and habitat management agencies. Additional resources for this book can be found at: <http://www.wiley.com/go/allendorf/populations>

Wildlife Demography compiles the multitude of available estimation techniques based on sex and age data, and presents these varying techniques in one organized, unified volume. Designed to guide researchers to the most appropriate estimator based upon their particular data set and the desired level of study precision, this book provides quantitative consideration, statistical models, estimator variance, assumptions and examples of use. The authors focus on estimation techniques using sex and age ratios because this data is relatively easy to collect and commonly used by wildlife management. Applicable to a wide array of wildlife species, including game and non-game birds and mammals Features more than 100 annotated examples illustrating application of statistical methods Includes more than 640 references of the analysis of nontagging data and the factors that may influence interpretation Derives historical and ad hoc demographic methods in a modern statistical framework

Population ecology has matured to a sophisticated science with astonishing potential for contributing solutions to wildlife conservation and management challenges. And yet, much of the applied power of wildlife population ecology remains untapped because its broad sweep across disparate subfields has been isolated in specialized texts. In this

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book, L. Scott Mills covers the full spectrum of applied wildlife population ecology, including genomic tools for non-invasive genetic sampling, predation, population projections, climate change and invasive species, harvest modeling, viability analysis, focal species concepts, and analyses of connectivity in fragmented landscapes. With a readable style, analytical rigor, and hundreds of examples drawn from around the world, *Conservation of Wildlife Populations* (2nd ed) provides the conceptual basis for applying population ecology to wildlife conservation decision-making. Although targeting primarily undergraduates and beginning graduate students with some basic training in basic ecology and statistics (in majors that could include wildlife biology, conservation biology, ecology, environmental studies, and biology), the book will also be useful for practitioners in the field who want to find - in one place and with plenty of applied examples - the latest advances in the genetic and demographic aspects of population ecology. Additional resources for this book can be found at: [www.wiley.com/go/mills/wildlifepopulations](http://www.wiley.com/go/mills/wildlifepopulations).

“This book is about hope in the face of forces that would degrade our world. This book is about the rich tapestry of life that shares our world now and about how we can maintain it, sometimes in places that we protect and set aside, more often in places where we share the lands and waters with a wide range of other species.” For more than 30 years, *Fundamentals of Conservation Biology* has been a valued mainstay of the literature, serving both to introduce new students to this ever-changing topic, and to

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provide an essential resource for academics and researchers working in the discipline. In the decade since the publication of the third edition, concerns about humanity's efforts to conserve the natural world have only grown deeper, as new threats to biodiversity continue to emerge. This fourth edition has taken into account a vast new literature, and boasts nearly a thousand new references as a result. By embracing new theory and practice and documenting many examples of both conservation successes and the hard lessons of real-world "wicked" environmental problems, *Fundamentals of Conservation Biology* remains a vital resource for biologists, conservationists, ecologists, environmentalists, and others.

*Reintroduction of Fish and Wildlife Populations* provides a practical step-by-step guide to successfully planning, implementing, and evaluating the reestablishment of animal populations in former habitats or their introduction in new environments. In each chapter, experts in reintroduction biology outline a comprehensive synthesis of core concepts, issues, techniques, and perspectives. This manual and reference supports scientists and managers from fisheries and wildlife professions as they plan reintroductions, initiate releases of individuals, and manage restored populations over time. Covering a broad range of taxonomic groups, ecosystems, and global regions, this edited volume is an essential guide for academics, students, and professionals in natural resource management.

A single-resource volume of information on the most current and effective techniques of

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wildlife modeling, *Models for Planning Wildlife Conservation in Large Landscapes* is appropriate for students and researchers alike. The unique blend of conceptual, methodological, and application chapters discusses research, applications and concepts of modeling and presents new ideas and strategies for wildlife habitat models used in conservation planning. The book makes important contributions to wildlife conservation of animals in several ways: (1) it highlights historical and contemporary advancements in the development of wildlife habitat models and their implementation in conservation planning; (2) it provides practical advice for the ecologist conducting such studies; and (3) it supplies directions for future research including new strategies for successful studies. Intended to provide a recipe for successful development of wildlife habitat models and their implementation in conservation planning, the book could be used in studying wildlife habitat models, conservation planning, and management techniques. Additionally it may be a supplemental text in courses dealing with quantitative assessment of wildlife populations. Additionally, the length of the book would be ideal for graduate student seminar course. Using wildlife habitat models in conservation planning is of considerable interest to wildlife biologists. With ever tightening budgets for wildlife research and planning activities, there is a growing need to use computer methods. Use of simulation models represents the single best alternative. However, it is imperative that these techniques be described in a single source. Moreover, biologists should be made aware of alternative modeling techniques.

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It is also important that practical guidance be provided to biologists along with a demonstration of utility of these procedures. Currently there is little guidance in the wildlife or natural resource planning literature on how best to incorporate wildlife planning activities, particularly community-based approaches. Now is the perfect time for a syntheistic publication that clearly outlines the concepts and available methods, and illustrates them. Only single resource book of information not only on various wildlife modeling techniques, but also with practical guidance on the demonstrated utility of each based on real-world conditions. Provides concepts, methods and applications for wildlife ecologists and others within a GIS context. Written by a team of subject-area experts

This volume identifies the primary problems faced in conserving wild populations of gorillas throughout Africa, pinpointing new approaches to solving these problems and outlining the increased role that zoos can play in gorilla conservation. It includes the in-depth expertise of field scientists in a variety of disciplines to discuss current conservation threats, novel approaches to conservation, and potential solutions. The fifth edition includes• for the first time, stunning color photographs throughout• chapters rearranged and grouped to best reflect phylogenetic relationships, with updated numbers of genera and species for each family• updated mammalian structural and functional adaptations, as well as ordinal fossil histories• recent advances in mammalian phylogeny, biogeography, social

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behavior, and ecology, with 12 new or revised cladograms reflecting current research findings• new breakout boxes on novel or unique aspects of mammals; new work on female post-copulatory mate choice, cooperative behaviors, group defense, and the role of the vomeronasal system• discussions of the current implications of climate change and other anthropogenic factors for mammalsMaintaining the accessible, readable style for which Feldhamer and his coauthors are well known, this new edition of Mammalogy is the authoritative textbook on this amazingly diverse class of vertebrates.

This impressive author team brings the wealth of advances in conservation genetics into the new edition of this introductory text, including new chapters on population genomics and genetic issues in introduced and invasive species. They continue the strong learning features for students - main points in the margin, chapter summaries, vital support with the mathematics, and further reading - and now guide the reader to software and databases. Many new references reflect the expansion of this field. With examples from mammals, birds,...

Wildlife Management and Conservation presents a clear overview of the management and conservation of animals, their habitats, and how people influence both. The relationship among these three components of wildlife management is explained in chapters written by leading experts and is designed

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to prepare wildlife students for careers in which they will be charged with maintaining healthy animal populations; finding ways to restore depleted populations while reducing overabundant, introduced, or pest species; and managing relationships among various human stakeholders. Topics covered in this book include • The definitions of wildlife and management • Human dimensions of wildlife management • Animal behavior • Predator–prey relationships • Structured decision making • Issues of scale in wildlife management • Wildlife health • Historical context of wildlife management and conservation • Hunting and trapping • Nongame species • Nutrition ecology • Water management • Climate change • Conservation planning

Professor L. Scott Mills has been named a 2009 Guggenheim Fellow by the board of trustees of the John Simon Guggenheim Memorial Foundation. *Conservation of Wildlife Populations* provides an accessible introduction to the most relevant concepts and principles for solving real-world management problems in wildlife and conservation biology. Bringing together insights from traditionally disparate disciplines, the book shows how population biology addresses important questions involving the harvest, monitoring, and conservation of wildlife populations. Covers the most up-to-date approaches for assessing factors that affect both population growth and interactions with other species, including

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predation, genetic changes, harvest, introduced species, viability analysis and habitat loss and fragmentation. Is an essential guide for undergraduates and postgraduate students of wildlife biology, conservation biology, ecology, and environmental studies and an invaluable resource for practising managers on how population biology can be applied to wildlife conservation and management. Artwork from the book is available to instructors online at <http://www.blackwellpublishing.com/mills>. An Instructor manual CD-ROM for this title is available. Please contact our Higher Education team at [HigherEducation@wiley.com](mailto:HigherEducation@wiley.com) for more information.

A synthesis of contemporary analytical and modeling approaches in population ecology The book provides an overview of the key analytical approaches that are currently used in demographic, genetic, and spatial analyses in population ecology. The chapters present current problems, introduce advances in analytical methods and models, and demonstrate the applications of quantitative methods to ecological data. The book covers new tools for designing robust field studies; estimation of abundance and demographic rates; matrix population models and analyses of population dynamics; and current approaches for genetic and spatial

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analysis. Each chapter is illustrated by empirical examples based on real datasets, with a companion website that offers online exercises and examples of computer code in the R statistical software platform. Fills a niche for a book that emphasizes applied aspects of population analysis Covers many of the current methods being used to analyse population dynamics and structure Illustrates the application of specific analytical methods through worked examples based on real datasets Offers readers the opportunity to work through examples or adapt the routines to their own datasets using computer code in the R statistical platform Population Ecology in Practice is an excellent book for upper-level undergraduate and graduate students taking courses in population ecology or ecological statistics, as well as established researchers needing a desktop reference for contemporary methods used to develop robust population assessments.

An authoritative overview of the concepts and applications of biological demography This book provides a comprehensive introduction to biodemography, an exciting interdisciplinary field that unites the natural science of biology with the social science of human demography. Biodemography is an essential resource for demographers, epidemiologists, gerontologists, and health professionals as well as ecologists, population biologists, entomologists, and

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conservation biologists. This accessible and innovative book is also ideal for the classroom. James Carey and Deborah Roach cover everything from baseline demographic concepts to biodemographic applications, and present models and equations in discrete rather than continuous form to enhance mathematical accessibility. They use a wealth of real-world examples that draw from data sets on both human and nonhuman species and offer an interdisciplinary approach to demography like no other, with topics ranging from kinship theory and family demography to reliability engineering, tort law, and demographic disasters such as the Titanic and the destruction of Napoleon's Grande Armée. Provides the first synthesis of demography and biology Covers baseline demographic models and concepts such as Lexis diagrams, mortality, fecundity, and population theory Features in-depth discussions of biodemographic applications like harvesting theory and mark-recapture Draws from data sets on species ranging from fruit flies and plants to elephants and humans Uses a uniquely interdisciplinary approach to demography, bringing together a diverse range of concepts, models, and applications Includes informative "biodemographic shorts," appendixes on data visualization and management, and more than 150 illustrations of models and equations

Genome sequencing enables scientists to study genes over time and to test the

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genetic variability of any form of life, from bacteria to mammals. Thanks to advances in molecular genetics, scientists can now determine an animal's degree of inbreeding or compare genetic variation of a captive species to wild or natural populations. Mapping an organism's genetic makeup recasts such terms as biodiversity and species and enables the conservation of rare or threatened species, populations, and genes. By introducing a new paradigm for studying and preserving life at a variety of levels, genomics offers solutions to previously intractable problems in understanding the biology of complex organisms and creates new tools for preserving the patterns and processes of life on this planet. Featuring a number of high-profile researchers, this volume introduces the use of molecular genetics in conservation biology and provides a historical perspective on the opportunities and challenges presented by new technologies. It discusses zoo-, museum-, and herbarium-based biological collections, which have expanded over the past decade, and covers the promises and problems of genomic and reproductive technology. The collection concludes with the philosophical and legal issues of conservation genetics and their potential effects on public policy.

The Northern Spotted Owl, a threatened species that occurs in coniferous forests in the western United States, has become a well-known environmental symbol.

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But how is the owl actually faring? This book contains the results of a long-term effort by a large group of leading researchers to document population trends of the Northern Spotted Owl. The study was conducted on 11 areas in the Pacific Northwest from 1985 to 2008, and its objectives were both to evaluate population trends and to assess relationships between reproductive rates and recruitment of owls and covariates such as weather, habitat, and the invasion of a closely related species, the Barred Owl. Among other findings, the study shows that fecundity was declining in five populations, stable in three, and increasing in three areas. Annual apparent survival rates of adults were declining in 10 out of 11 areas. This broad, synthetic work provides the most complete and up-to-date picture of the population status of this inconspicuous forest owl, which is at the center of the complex and often volatile debate regarding the management of forest lands in the western United States.

This second edition emphasizes the environmental impact on reproduction, with updated chapters throughout as well as complete new chapters on species such as sharks and rays. This is a wide-ranging book that will be of relevance to anyone involved in species conservation, and provides critical perspectives on the real utility of current and emerging reproductive sciences. Understanding reproductive biology is centrally important to the way many of the world's

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conservation problems should be tackled. Currently the extinction problem is huge, with up to 30% of the world's fauna being expected to disappear in the next 50 years. Nevertheless, it has been estimated that the global population of animals in zoos encompasses 12,000 – 15,000 species, and we anticipate that every effort will be made to preserve these species for as long as possible, minimizing inbreeding effects and providing the best welfare standards available. Even if the reproductive biology community cannot solve the global biodiversity crisis for all wild species, we should do our best to maintain important captive populations. Reproductive biology in this context is much more than the development of techniques for helping with too little or too much breeding. While some of the relevant techniques are useful for individual species that society might target for a variety of reasons, whether nationalistic, cultural or practical, technical developments have to be backed up by thorough biological understanding of the background behind the problems.

This is an introduction to the concepts and principles for solving management problems in wildlife and conservation biology. The book shows how population biology addresses questions involving the harvest, monitoring, and conservation of wildlife populations.

A fresh approach to some of the classic questions in ecology.

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Population biology is central to the discipline of wildlife management and conservation. Effective management of wildlife populations requires a thorough understanding of ecological principles and detailed knowledge of the population under consideration. This book is designed to introduce the reader to the array of factors that may influence the size or composition of bird and mammal populations. The collection is organized into two parts. The first, "Characteristics of Wildlife Populations," examines the processes that produce numerical changes in populations--natality, mortality, and movements--and investigates their consequences--age and sex composition, growth and fluctuation. The second part, "Factors Affecting Population Characteristics," examines the biotic and abiotic factors that may affect the size and composition of wildlife populations through their influence on rates of reproduction, mortality, and movements. These factors include weather, predation, exploitation, interspecific and intraspecific competition for resources, behavior, and physiological stress. Large terrestrial mammalian herbivores play critical roles in ecosystems by acting as regulators of energy and nutrient cycles, modulators of plant community composition and grassland-woodland transitions, agents of seed dispersal, and as prey for large carnivores. Though large herbivores represent a prominent component of mammalian assemblages throughout South and Southeast Asia,

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little is known about their roles in ecosystems in the region. This volume presents, for the first time, a collection of studies on the ecology of the rich and diverse large herbivore assemblages of South and Southeast Asia. Prepared by experts on herbivores of the region, it covers a comprehensive range of topics, including their evolutionary history, behavioural, nutritional, and population ecology, patterns of diversity across environmental gradients, roles as seed dispersers and regulators of plant growth, community compositions, and their conservation in the face of hunting and global change.

In the past, wildlife living in urban areas were ignored by wildlife professionals and urban planners because cities were perceived as places for people and not for wild animals. Paradoxically, though, many species of wildlife thrive in these built environments. Interactions between humans and wildlife are more frequent in urban areas than any other place on earth and these interactions impact human health, safety and welfare in both positive and negative ways. Although urban wildlife control pest species, pollinate plants and are fun to watch, they also damage property, spread disease and even attack people and pets. In urban areas, the combination of dense human populations, buildings, impermeable surfaces, introduced vegetation, and high concentrations of food, water and pollution alter wildlife populations and communities in ways unseen in more

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natural environments. For these ecological and practical reasons, researchers and managers have shown a growing interest in urban wildlife ecology and management. This growing interest in urban wildlife has inspired many studies on the subject that have yet to be synthesized in a cohesive narrative. *Urban Wildlife: Theory and Practice* fills this void by synthesizing the latest ecological and social knowledge in the subject area into an interdisciplinary and practical text. This volume provides a foundation for the future growth and understanding of urban wildlife ecology and management by:

- Clearly defining the concepts used to study and describe urban wildlife,
- Offering a cohesive understanding of the coupled natural and social drivers that shape urban wildlife ecology,
- Presenting the patterns and processes of wildlife response to an urbanizing world and explaining the mechanisms behind them and
- Proposing means to create physical and social environments that are mutually beneficial for both humans and wildlife.

An analysis of forces affecting wildlife politics worldwide, covering topics such as overexploitation, hunting, ecotourism and trafficking.

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"In the field of human evolution, few subjects have generated as much controversy as the fate of the Neandertals. Most debates have centered on the problem of their affiliation with early modern humans. This book examines the hypothesis that Neandertals and early modern humans differed in terms of subsistence. To assess this hypothesis, the analysis focuses on animal bones accumulated by these groups at Saint-Cesaire, a collapsed cave in western France. The faunal evidence suggests that Neandertals and early modern humans exploited a similar range of game species"--

Expanding development of resources to meet growing world energy demands will inevitably increase impacts on wildlife populations. Building a greater body of knowledge on the impacts of energy resource development is thus critical for future development planning and wildlife population conservation. The elk herd (Wyoming Herd Unit 320) inhabiting the Fortification Creek Area (FCA) in northeastern Wyoming provided an ideal opportunity to isolate and study the impacts of disturbance from energy development on a wildlife population. The objectives of Chapter 2 was to identify elk resource selection and impacts of CBNG development on elk. One of the major findings of Chapter 2 was

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documentation of shifts in elk resource use where elk avoided areas of development, thereby reducing high use habitat by 43-50%. This chapter was published in *Rangeland Ecology and Management* (67:369-379), with co-authors Jeffrey L. Beck, Thomas E. Bills, and Scott N. Miller. The primary objective of Chapter 3 was to assess the ability of elk to mitigate disturbance impacts through spatial and temporal behavioral changes by applying a novel combination of a frequency of use sampling scheme with a mixed-effects statistical framework. One of the major findings of Chapter 3 was movement of elk into areas closer to disturbance at night to access resources when human activity was reduced. Co-authors on this manuscript include Jeffrey L. Beck, Shaun S. Wulff, and Shannon E. Albeke. The objective for Chapter 4 was to further assess disturbance impacts on the FCA elk herd by assessing population dynamics. Limitations in available demographic data drove the use of an innovative alternative analysis using a Bayesian framework. We successfully applied MCMC techniques to sample posterior distributions of simulated elk demographic traits. This application demonstrated the applicability of Bayesian-based statistics as an analysis solution when others are inappropriate. The results of this chapter also highlight the influence of harvest on an elk population. We intend to submit this chapter for publication consideration in *Wildlife Biology*.

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Analysis and Management of Animal Populations deals with the processes involved in making informed decisions about the management of animal populations. It covers the modeling of population responses to management actions, the estimation of quantities needed in the modeling effort, and the application of these estimates and models to the development of sound management decisions. The book synthesizes and integrates in a single volume the methods associated with these themes, as they apply to ecological assessment and conservation of animal populations. Integrates population modeling, parameter estimation and decision-theoretic approaches to management in a single, cohesive framework Provides authoritative, state-of-the-art descriptions of quantitative approaches to modeling, estimation and decision-making Emphasizes the role of mathematical modeling in the conduct of science and management Utilizes a unifying biological context, consistent mathematical notation, and numerous biological examples

Wildlife management is about finding the balance between conservation of endangered species and mitigating the impacts of overabundant wildlife on humans and the environment. This book deals with the monitoring of fauna, related diseases, and interactions with humans. It is intended to assist and support the professional worker in wildlife management.

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"Society for Ecological Restoration"--Cover.

Understanding wildlife population ecology is vital for all wildlife managers and conservation biologists. Leopold draws on 30 years of research and teaching experience to give students and natural resource professionals the foundation they need to effectively manage wildlife populations. He begins with the key statistical concepts and research approaches necessary to gain insight into various models of population dynamics. The many factors that influence wildlife populations are thoroughly explored and their consequences are investigated. In addition, the author presents techniques for analyzing wildlife harvest data and a lucid discussion of valuable wildlife census methods. Frequent examples of foundational literature supplement each chapter with applications of the theories and provide a concise compendium of fundamental concepts of population ecology. Abundant statistical exercises reinforce students' learning throughout the text.

"A Publication of the Cooper Ornithological Society."

Also ideal for undergraduate and graduate natural resource and conservation courses, the book is organized perfectly for a one-semester class.

Organ, James Peek, William Porter, John Sandlos, James A. Schaefer

Provides concise, yet authoritative descriptions of the most common techniques used to study

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wild carnivores and to conserve and manage their populations within increasingly human-dominated landscapes.

Bryant White, Steven A. Williams

In our human-dominated world an increasing number of species are forced to cope with landscapes in which habitat has become fragmented and the quality of remnant patches is under continued pressure from human competition for common resources (Saunders et al. 1991, McCullough 1996, Crooks and Sanjayan 2006). This has implications for the abundance, distribution, and dynamics of wildlife populations (Andrewartha and Birch 1954, Wiens 1976). It is in this context that most conservation biologists have embraced the constructs of spatial ecology. However, our understanding of the spatial dynamics of populations is often based on overly simplistic assumptions about movement, the central process of interest. The snail kite is a highly endangered, wetland-dependent raptor restricted to central and southern peninsular Florida (Sykes et al. 1995). I demonstrate how patterns from individual dispersal and movement translate into relevant scales for population structure that can be used to better understand changes in spatial and age distributions and the roles of local demography and dispersal in population dynamics. The results of my work provide convincing evidence that the snail kite population in Florida is best understood as a spatially structured population currently comprised of subpopulations linked through decreasing contributions of dispersal.

Population genomics is revolutionizing wildlife biology, conservation, and management by providing key and novel insights into genetic, population and landscape-level processes in wildlife, with unprecedented power and accuracy. This pioneering book presents the advances and potential of population genomics in wildlife, outlining key population genomics concepts

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and questions in wildlife biology, population genomics approaches that are specifically applicable to wildlife, and application of population genomics in wildlife population and evolutionary biology, ecology, adaptation and conservation and management. It is important for students, researchers, and wildlife professionals to understand the growing set of population genomics tools that can address issues from delineation of wildlife populations to assessing their capacity to adapt to environmental change. This book brings together leading experts in wildlife population genomics to discuss the key areas of the field, as well as challenges, opportunities and future prospects of wildlife population genomics.

Papers from a summit, "Science for Parks, Parks for Science: the next century," organized by University of California, Berkeley, in partnership with the National Geographic Society and the National Park Service and held 25-27 March 2015 at the University of California, Berkeley.

*Yellowstone Cougars* examines the effect of wolf restoration on the cougar population in Yellowstone National Park—one of the largest national parks in the American West. No other study has ever specifically addressed the theoretical and practical aspects of competition between large carnivores in North America. The authors provide a thorough analysis of cougar ecology, how they interact with and are influenced by wolves—their main competitor—and how this knowledge informs management and conservation of both species across the West. Of practical importance, *Yellowstone Cougars* addresses the management and conservation of multiple carnivores in increasingly human-dominated landscapes. The authors move beyond a single-species approach to cougar management and conservation to one that considers multiple species, which was impossible to untangle before wolf reestablishment in the Yellowstone area provided biologists with this research opportunity. *Yellowstone Cougars*

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provides objective scientific data at the forefront of understanding cougars and large carnivore community structure and management issues in the Greater Yellowstone Ecosystem, as well as in other areas where wolves and cougars are reestablishing. Intended for an audience of scientists, wildlife managers, conservationists, and academics, the book also sets a theoretical precedent for writing about competition between carnivorous mammals.

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