

# Soay Sheep

Dynamics and Selection in an Island Population

Edited by

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# Soay Sheep Dynamics And Selection In An Island Population

**Robert May, Angela R. McLean**



## **Soay Sheep Dynamics And Selection In An Island Population:**

*Soay Sheep* T. H. Clutton-Brock, 2003 Synthesis of remarkable long term and well known study of the population dynamics of soay sheep on St Kilda      **Soay Sheep** T. H. Clutton-Brock, Josephine M. Pemberton, 2004      Dynamics of Large Herbivore Populations in Changing Environments Norman Owen-Smith, 2009-12-18 This book aims to reconcile theoretical models of population dynamics with what is currently known about the population dynamics of large mammalian herbivores It arose from a working group established at the National Center for Ecological Analysis and Synthesis at the University of California Santa Barbara to address the need for models that better accommodate environmental variability especially for herbivores dependent on changing vegetation resources The initial chapter reviews findings from definitive long term studies of certain other ungulate populations many based on individually identifiable animals Other chapters cover climatic influences emphasising temperate versus tropical contrasts and demographic processes underlying population dynamics more generally There are new assessments of irruptive population dynamics and of the consequences of landscape heterogeneity for herbivore populations An initial review of candidate population models is followed up by a final chapter outlining how these models might be modified to better accommodate environmental variability The contents provide a foundation for resolving problems of diminishing large mammal populations in Africa over abundant ungulate populations elsewhere and general consequences of global change for biodiversity conservation This book will serve as a definitive outline of what is currently known about the population dynamics of large herbivores      *Wildlife Disease Ecology* Kenneth Wilson, Andy Fenton, Dan Tompkins, 2019-11-14 Introduces readers to key case studies that illustrate how theory and data can be integrated to understand wildlife disease ecology      **Introduction to Modeling in Wildlife and Resource Conservation** Norman Owen-Smith, 2009-03-12 This book provides students with the skills to develop their own models for application in conservation biology and wildlife management Assuming no special mathematical expertise the computational models used are kept simple and show how to develop models in both spreadsheet and programming language format Develops thought provoking applications which emphasize the value of modeling as a learning tool Examines basic descriptive equations matrix representations consumer resources interactions applications in simulation scenarios harvesting population viability metapopulation dynamics disease outbreaks vegetation stage and state dynamics habitat suitability assessment and model selection statistics Includes a wide range of examples relating to birds fish plants and large African mammals      **Mammal Societies** Tim Clutton-Brock, 2016-04-25 The book aims to integrate our understanding of mammalian societies into a novel synthesis that is relevant to behavioural ecologists ecologists and anthropologists It adopts a coherent structure that deals initially with the characteristics and strategies of females before covering those of males cooperative societies and hominid societies It reviews our current understanding both of the structure of societies and of the strategies of individuals it combines coverage of relevant areas of theory with coverage of interspecific comparisons

intraspecific comparisons and experiments it explores both evolutionary causes of different traits and their ecological consequences and it integrates research on different groups of mammals with research on primates and humans and attempts to put research on human societies into a broader perspective

**Domestic Animal Behaviour...** Broom, D.M., Fraser, A.F., Behaviour is a significant indicator of health in animals and understanding behaviour is the key to good management Animal behaviour and animal welfare science are fast becoming core topics in the curricula of agriculture and veterinary students The eagerly awaited fourth edition of Farm Animal Behaviour and Welfare builds on the coverage of the previous edition fully updating it to take into account developments over the last 10 years This new edition covers companion animals as well as farm animal species including farmed fish It is an indispensable textbook covering the major and growing areas in agricultural and veterinary science and practice There is now a 5th Edition of this book for sale

**Reindeer and Caribou** Morten Tryland, Susan J. Kutz, 2018-11-09 This book is a comprehensive presentation of health and diseases in reindeer and caribou or just Rangifer a key Circumpolar species with broad social and ecological value It is an essential reference for anyone interested in the biology and health of wild or semi domesticated reindeer and caribou and is more broadly relevant for those with interests in other species of free ranging and captive cervids Beginning with a general introduction to Rangifer as a species it then focuses on Rangifer health as a concept and describes the determinants of health at an individual and population level Chapters cover a range of topics from nutrition and feeding to stress non infectious and infectious diseases meat hygiene capture and restraint diagnosis and treatment of health issues and finally potential impacts of climate change on health of Rangifer Reindeer and Caribou Health and Disease compiles extensive research and experience based information on issues ranging from drug doses for chemical immobilization blood chemistry values and raising an orphaned calf In addition it contains hundreds of high quality colour illustrations that contribute to its value as a diagnostic resource for recognizing various parasites pathogens and signs of disease both in live and dead animals Each chapter is followed by a comprehensive list of references and a list of contact information for all the contributors identifying world experts in the different areas of health for this circumpolar and fascinating species This book is compulsory reading and an indispensable resource for anyone dealing with health in reindeer and caribou including veterinarians wildlife biologists and managers reindeer herders game ranchers zoological husbandry personnel and students with wildlife health

**Perishable Material Culture in Prehistory** Linda M. Hurcombe, 2014-04-24 Perishable Material Culture in Prehistory provides new approaches and integrates a broad range of data to address a neglected topic organic material in the prehistoric record Providing new ideas and connections and suggesting revisionist ways of thinking about broad themes in the past this book demonstrates the efficacy of an holistic approach by using examples and case studies No other book covers such a broad range of organic materials from a social and object biography perspective or concentrates so fully on approaches to the missing components of prehistoric material culture This book will be an essential addition for those people

wishing to understand better the nature and importance of organic materials as the missing majority of prehistoric material culture

**Alternative Reproductive Tactics** Rui F. Oliveira, Michael Taborsky, H. Jane Brockmann, 2008-03-13 The study of alternative reproductive tactics the behavioural strategies used by individuals to increase their reproductive success is an evolutionary puzzle and one of great interest to researchers For instance why do some males guard both nest and eggs while others sneak into nests while pairs are spawning and fertilise those eggs The field offers a special opportunity to study the evolution and functional causes of phenotypic variation which is a general problem in the field of evolutionary biology By integrating both mechanistic psychological and evolutionary behavioural ecology perspectives and by covering a great diversity of species *Alternative Reproductive Tactics* addresses this integrated topic of longstanding interest bringing together a multitude of otherwise scattered information in an accessible form that is ideal for graduate students and researchers

**The Herds Shot Round the World** Rebecca J. H. Woods, 2017-10-10 As Britain industrialized in the early nineteenth century animal breeders faced the need to convert livestock into products while maintaining the distinctive character of their breeds Thus they transformed cattle and sheep adapted to regional environments into bulky quick fattening beasts Exploring the environmental and economic ramifications of imperial expansion on colonial environments and production practices Rebecca J H Woods traces how global physiological and ecological diversity eroded under the technological economic and cultural system that grew up around the production of livestock by the British Empire Attending to the relationship between type and place and what it means to call a particular breed of livestock native Woods highlights the inherent tension between consumer expectations in the metropole and the ecological reality at the periphery Based on extensive archival work in the United Kingdom New Zealand and Australia this study illuminates the connections between the biological consequences and the politics of imperialism In tracing both the national origins and imperial expansion of British breeds Woods uncovers the processes that laid the foundation for our livestock industry today

*Practical Field Ecology* C. Philip Wheeler, James R. Bell, Penny A. Cook, 2020-05-19 Offers a comprehensive accessible introduction to experimental design field monitoring skills for plants and animals data analysis interpretation and reporting This user friendly book presents field monitoring skills for both plants and animals within the context of a research project This text provides a single resource to take the reader all the way through from the planning stage into the field guiding through sampling organism identification computer based data analysis and interpretation and finally how to present the results to maximise the impact of the work Logically structured throughout and revised extensively in the second edition the book concentrates on the techniques required to design a field based ecological survey and shows how to execute an appropriate sampling regime It evaluates appropriate sampling and analytical methods identifying potential problems associated with various techniques and how to mitigate these The second edition of this popular text has updated reference material and weblinks increased the number of case studies by 50% to illustrate the use of specific techniques in the field added over 20%

more figures including 8 colour plates and made more extensive use of footnotes to provide extra details Extensions to topics covered in the first edition include additional discussion of ethical issues statistical methods sample size estimation use of the statistical package R mixed models bioindicators especially for freshwater pollution seeds fecundity and population dynamics including static and dynamic life tables forestry techniques including tree coring and tree mortality calculations the use of data repositories writing for a journal and producing poster and oral presentations In addition the use of new and emerging technologies has been a particular focus including mobile apps for environmental monitoring and identification land cover and GIS the use of drones including legal frameworks and codes of practice molecular field techniques including DNA analysis in the field including eDNA photo matching for identifying individuals camera trapping modern techniques for detecting and analysing bat echolocation calls and data storage using the cloud Divided into six distinct chapters Practical Field Ecology 2nd Edition begins at project inception with a chapter on planning covering health and safety along with guidance on how to ensure that the sampling and experimental design is suitable for subsequent statistical analysis Following a chapter dealing with site characterisation and general aspects of species identification subsequent chapters describe the techniques used to survey and census particular groups of organisms The final chapters cover analysing interpreting and presenting data and writing up the research Offers a readable and approachable integrated guide devoted to field based research projects Takes students from the planning stage into the field and clearly guides them through organism identification in the laboratory and computer based data analysis interpretation and data presentation Includes a chapter on how to write project reports and present findings in a variety of formats to differing audiences Aimed at undergraduates taking courses in Ecology Biology Geography and Environmental Science Practical Field Ecology 2nd Edition will also benefit postgraduates seeking to support their projects

**Animal Behaviour: Evolution and Mechanisms** Nils Anthes, Peter M. Kappeler, Ralph Bergmüller, Wolf Blanckenhorn, H. Jane Brockmann, Claudia Fichtel, Lutz Fromhage, Joachim Frommen, Wolfgang Goymann, Juergen Heinze, Katharina Hirschenhauser, Heribert Hofer, Sylvia Kaiser, Bart Kempenaers, Gerald Kerth, Judith Ingrid Korb, Kurt M. Kotrschal, Cornelia Kraus, Martha Manser, Nico Michiels, Robin F. A. Moritz, Mario Pahl, Dustin Penn, Norbert Sachser, Martin Schaefer, Carel P. van Schaik, Jutta M. Schneider, Isabella Schreiber, Michael Taborsky, Jürgen Tautz, Fritz Trillmich, Shaowu Zhang, 2010-04-03 This up to date review examines key areas of animal behaviour including communication cognition conflict cooperation sexual selection and behavioural variation Various tests are covered including recent empirical examples

**Climate, Clothing, and Agriculture in Prehistory** Ian Gilligan, 2019 The first book on the origin of clothes shows why climate change was crucial for the origin of agriculture too

**The Viking Diaspora** Judith Jesch, 2015-06-05 The Viking Diaspora presents the early medieval migrations of people language and culture from mainland Scandinavia to new homes in the British Isles the North Atlantic the Baltic and the East as a form of diaspora It discusses the ways in which migrants from Russia in the east to Greenland in the west were

conscious of being connected not only to the people and traditions of their homelands but also to other migrants of Scandinavian origin in many other locations Rather than the movements of armies this book concentrates on the movements of people and the shared heritage and culture that connected them This on going contact throughout half a millennium can be traced in the laws literatures material culture and even environment of the various regions of the Viking diaspora Judith Jesch considers all of these connections and highlights in detail significant forms of cultural contact including gender beliefs and identities Beginning with an overview of Vikings and the Viking Age the nature of the evidence available and a full exploration of the concept of diaspora the book then provides a detailed demonstration of the appropriateness of the term to the world peopled by Scandinavians This book is the first to explain Scandinavian expansion using this model and presents the Viking Age in a new and exciting way for students of Vikings and medieval history

**Hypsodonty in Mammals** Richard H. Madden, 2015 This book explores the central importance of soil ingestion and earth surface processes in driving the evolution of tooth shape in mammals

**The Impact of Environmental Variability on Ecological Systems** D.A. Vasseur, K.S. McCann, 2007-05-08 Fluctuations in the environmental conditions impacting life are ubiquitous These fluctuations induce changes in the vital processes occurring within individual organisms such as cellular metabolism and the ecological processes occurring among individuals such as competition mutualism and predation ultimately leading to observable fluctuations in the commonly measured characteristics of ecological systems From a very simple perspective these processes are all modulators of environmental variability We might best be able to understand the final form of this modulation the impact of environmental variability on ecological systems by building from an understanding of the responses of these life processes in isolation to an understanding of their responses in harmony The impact of environmental variability on ecological systems is an issue that has been at the forefront of ecological research for many years Research is taking place on many fronts including theoretical mathematical based analyses natural ecosystem observation and experimentation This book brings together contributions from these three fronts to provide readers with a comprehensive look at the challenges for ecological systems and ecological research alike

Theoretical Ecology Robert May, Angela R. McLean, 2007-02-15 Publisher description

Maternal Effects in Mammals Dario Maestripieri, Jill M. Mateo, 2009-08-01 Evolutionary maternal effects occur whenever a mother's phenotypic traits directly affect her offspring's phenotype independent of the offspring's genotype Some of the phenotypic traits that result in maternal effects have a genetic basis whereas others are environmentally determined For example the size of a litter produced by a mammalian mother a trait with a strong genetic basis can affect the growth rate of her offspring while a mother's dominance rank an environmentally determined trait can affect the dominance rank of her offspring The first volume published on the subject in more than a decade Maternal Effects in Mammals reflects advances in genomic ecological and behavioral research as well new understandings of the evolutionary interplay between mothers and their offspring Dario Maestripieri and Jill M Mateo bring together a learned group of

contributors to synthesize the vast literature on a range of species highlight evolutionary processes that were previously overlooked and propose new avenues of research *Maternal Effects in Mammals* will serve as the most comprehensive compendium on and stimulus for interdisciplinary treatments of mammalian maternal effects     *Demographic Methods Across the Tree of Life* Roberto Salguero-Gómez, Marlène Gamelon, 2021 This novel book provides the reader with the fundamentals of data collection model construction analyses and interpretation across a wide repertoire of demographic techniques and protocols clearly guided throughout with fully reproducible R scripts



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## **Table of Contents Soay Sheep Dynamics And Selection In An Island Population**

1. Understanding the eBook Soay Sheep Dynamics And Selection In An Island Population
  - The Rise of Digital Reading Soay Sheep Dynamics And Selection In An Island Population
  - Advantages of eBooks Over Traditional Books
2. Identifying Soay Sheep Dynamics And Selection In An Island Population
  - Exploring Different Genres
  - Considering Fiction vs. Non-Fiction
  - Determining Your Reading Goals
3. Choosing the Right eBook Platform
  - Popular eBook Platforms
  - Features to Look for in an Soay Sheep Dynamics And Selection In An Island Population
  - User-Friendly Interface
4. Exploring eBook Recommendations from Soay Sheep Dynamics And Selection In An Island Population
  - Personalized Recommendations
  - Soay Sheep Dynamics And Selection In An Island Population User Reviews and Ratings
  - Soay Sheep Dynamics And Selection In An Island Population and Bestseller Lists
5. Accessing Soay Sheep Dynamics And Selection In An Island Population Free and Paid eBooks
  - Soay Sheep Dynamics And Selection In An Island Population Public Domain eBooks
  - Soay Sheep Dynamics And Selection In An Island Population eBook Subscription Services
  - Soay Sheep Dynamics And Selection In An Island Population Budget-Friendly Options
6. Navigating Soay Sheep Dynamics And Selection In An Island Population eBook Formats

- ePub, PDF, MOBI, and More
- Soay Sheep Dynamics And Selection In An Island Population Compatibility with Devices
- Soay Sheep Dynamics And Selection In An Island Population Enhanced eBook Features
- 7. Enhancing Your Reading Experience
  - Adjustable Fonts and Text Sizes of Soay Sheep Dynamics And Selection In An Island Population
  - Highlighting and Note-Taking Soay Sheep Dynamics And Selection In An Island Population
  - Interactive Elements Soay Sheep Dynamics And Selection In An Island Population
- 8. Staying Engaged with Soay Sheep Dynamics And Selection In An Island Population
  - Joining Online Reading Communities
  - Participating in Virtual Book Clubs
  - Following Authors and Publishers Soay Sheep Dynamics And Selection In An Island Population
- 9. Balancing eBooks and Physical Books Soay Sheep Dynamics And Selection In An Island Population
  - Benefits of a Digital Library
  - Creating a Diverse Reading Collection Soay Sheep Dynamics And Selection In An Island Population
- 10. Overcoming Reading Challenges
  - Dealing with Digital Eye Strain
  - Minimizing Distractions
  - Managing Screen Time
- 11. Cultivating a Reading Routine Soay Sheep Dynamics And Selection In An Island Population
  - Setting Reading Goals Soay Sheep Dynamics And Selection In An Island Population
  - Carving Out Dedicated Reading Time
- 12. Sourcing Reliable Information of Soay Sheep Dynamics And Selection In An Island Population
  - Fact-Checking eBook Content of Soay Sheep Dynamics And Selection In An Island Population
  - Distinguishing Credible Sources
- 13. Promoting Lifelong Learning
  - Utilizing eBooks for Skill Development
  - Exploring Educational eBooks
- 14. Embracing eBook Trends
  - Integration of Multimedia Elements
  - Interactive and Gamified eBooks

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