

Ecology and Conservation of Lynx in the United States

When we began the task of elucidating the scientific basis for lynx conservation in June 1998, I had little idea how constrained our time would be. The request to do this job came from a consortium of federal land management agencies in response to the U.S. Fish and Wildlife Service's "proposed rule" to list the Canada lynx as a threatened or endangered species throughout its range in the contiguous United States. I underestimated the extent to which legal mandates and the expectations of information-hungry biologists and decision-makers would push us. By late February 1999 we had provided nearly 800 pages of "working drafts" to agency personnel who were responsible for various products associated with the potential listing. But the situation grew even more urgent later in the spring when the USFWS decided to delay its final listing decision by six months, from July 1999 to January 2000, so they could consider the entirety of our final product. Although unknown to me at the time, this decision necessitated that our work be made available for public comment *in final form* far sooner than we

had planned. We were told that if we failed to meet this timeline, legal constraints would ensure that agency officials and the general public would not be able to use our findings in decision-making and public involvement attendant to the listing process. Moreover, we were told that in order for all this to happen, our work would have to be disseminated via the *Internet!* To say the least, it was disconcerting that our “rush job” would be available all over the globe, and that the prospects for publishing our work in book form might be compromised. But as scientists interested in the application of our work, we had little choice.

Two fortunate circumstances helped to mitigate this dilemma. First, the Rocky Mountain Research Station has a first-class Publishing Services staff under the direction of Louise Kingsbury. It was the professional capability and dedication of this group that made it possible for us to get camera-ready copies of Chapters 1-16 onto the Internet within the allotted time. Published electronically as USDA Forest Service, General Technical Report RMRS–GTR-30WWW, this version of our work was made available to agency personnel as well as to the general public. Thus, all of the most pertinent information in this book was available for use in the sociopolitical process defined pursuant to the Endangered Species Act.

The second fortuitous circumstance was that our work caught the attention of Darrin Pratt, Acquisitions Editor of the University of Colorado Press. Mr. Pratt’s interest and the ultimate acceptance of our book for publication by the University of Colorado Press has been extremely gratifying. Accordingly, we are deeply grateful to Louise Kingsbury, Darrin Pratt, and to all those who have been instrumental in the editing, production, and publication of both the electronic and hard copy editions of this book.

In this book, and in our related activities, we have drawn a clear line between science and policy. Our job as scientists was to summarize the state of knowledge, articulate meaningful understandings when possible, and identify important knowledge gaps relative to the information needed for conservation plans and policy. Perhaps a more difficult job was left to our land-management colleagues who must use this information as the basis for complex and controversial judgments about land management actions. In this regard, we appreciate the efforts of Bill Ruediger and members of his “Lynx Biology Team” for their efforts to apply the information in this volume on behalf of the resource. We also offer a special thanks to Kathy McAllister, Deputy Regional Forester for the Northern Region of the National Forest System and Leader of the Interagency Lynx Steering Committee. Although beset by great pressure to meet procedural deadlines requiring our information, Kathy was patient and understanding, even though from her perspective the pace of our work was ponderous. Her support, and

the support of Steering Committee “Chief of Staff,” Dr. Martin Prather, has done much to ensure the incorporation of science into policy and to facilitate effective working relationships between scientists and managers.

My deepest gratitude is reserved for my colleagues and friends on the Lynx Science Team. Dr. Keith Aubry’s writing skill, even temperament, and tireless work was key to our success. Keith was absolutely selfless in his efforts, and his ability to synthesize and communicate complex material was central to much of our work. Professor Steven Buskirk lent his well-deserved credentials as an internationally respected mammalogist and carnivore ecologist to our team. In addition to his full-time teaching responsibilities, Steve contributed innumerable hours to this effort; his scientific acumen, broad expertise, and high standard of scholarship were tremendous assets. Professor Charles Krebs is one of the most respected ecologists in the world, as well as one of the premier authorities on lynx and snowshoe hare ecology in Canada. I am indebted to him for his participation on this committee, for his dependable good humor, and for his representation of the cadre of outstanding Canadian researchers of lynx and snowshoe hares. Dr. Gary Koehler is the most experienced lynx researcher in the United States, and his work has formed the basis for most of what is known about lynx in this country. Gary’s open-mindedness, commitment to the resource, first-hand knowledge of lynx ecology, and impeccable professionalism made him a great asset to the Team. Dr. Kevin McKelvey contributed expertise as a modeler, forest ecologist, and experienced analyst of population patterns and viability. Kevin is an enviably well-rounded and thoughtful scientist whose analytical skills and keen intellect played a critical role in our work. Dr. John Squires is currently managing the most ambitious lynx study undertaken to date. His first-hand knowledge and insights gained from this work along with his command of the scientific literature and his extensive field experience with lynx and other wide-ranging carnivores was of great value to the group. It was an honor for me to lead this team, and I deeply respect the professional competence and dedication of each of these men.

Although Lynx Science Team members are officially listed as technical editors of this volume, this group wrote over two-thirds of the text and authored 13 of the 18 chapters. In addition, each Team Member served as editor on multiple chapters for which they were not authors. In this capacity, they managed the peer review process, presided over chapter revisions, and worked with me in making final decisions about acceptance of chapters for publication. As anyone who has served in this capacity knows, peer review is often a demanding, lengthy, iterative process requiring time and patience on the part of both authors and editors. This book was no exception, and it

is only through the tremendous efforts of the above mentioned Science Team members that we were able to complete this process so quickly.

In this context, we extend our gratitude to a cadre of peer reviewers, most of whom were asked to provide detailed technical reviews in ridiculously short times. Included here we thank: Fred Allendorf, Clayton Apps, Theodore Bailey, Christina Hargis, Greg Hayward, Doug Houston, John McKay, Chuck Meslow, Francois Messier, Scott Mills, Garth Mowat, Erin O'Doherty, Mark O'Donoghue, Dan Pletscher, Roger Powell, Martin Raphael, Kermit Ritland, Mike Wisdom, Bill Zielinski, and numerous anonymous reviewers.

We extend a special thanks to Tina Mainey for her invaluable administrative and moral support and for her attention to endless details throughout this project. For additional administrative support we also thank Lori Moffatt, Deanna Crawford, Stacey Clark, and Sarah Day. Our special thanks also goes to Lane Eskew, Lead Editor for this project, who did an amazing job of correcting countless errors and of bringing consistency to our presentations. We also thank Madelyn Dillon and Louise Kingsbury for additional editorial work; Joyce Stoddard and Nancy Chadwick for their lead production work; Loa Collins and Karen Eason for additional production work; and to Suzy Stephens for getting all this on the Web. All of these people sacrificed nights and weekends to get this job done on schedule, and we are grateful.

Leonard F. Ruggiero
Lynx Science Team Leader